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160151

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November 7, 1995

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Re: Request for Information Pursuant to Section 104(e) of CERCLA for the Sauget Area 1 Sites in Sauget Illinois

Dear Ms. Adams and Mr. Martin:

This office represents Cerro Copper Products Co., and we are submitting this letter to supplement Cerro's response to the above-referenced information request. Cerro has recently learned of two individuals who claim to have knowledge about dumping or potential dumping at Area I Sites. These individuals are:

Mr. Charles McDonnell
11 Judith Lane
Cahokia, Illinois
(618) 337-5573

and

Mr. Charles Penny
108 Indian Hill
Belleville, Illinois
(618) 538-5314

Please contact the undersigned if you have any questions or comments regarding this information.

Very truly yours,

Richard F. Ricci

RFR:ljc
cc: Mr. Joseph M. Grana

CERRO COPPER PRODUCTS COMPANY RESPONSE TO AREA I INFORMATION REQUESTS

Preliminary Statement

Cerro Copper Products Co. ("Cerro") provides the following information in response to United States Environmental Protection Agency's request dated July 13, 1994 and received July 18, 1994. Cerro is providing this information in furtherance of its cooperative effort to address environmental conditions in the Sauget area. These responses, however, do not constitute, and should not be construed as a waiver by Cerro of any objections it might have to these requests or any future such requests. In addition, neither the submission of these responses or documents, or the information contained within them, shall constitute or be misconstrued as an admission of law or fact by Cerro.

Cerro has provided those documents responsive to Sauget Sites Area 1 - Site G in Cerro's submittal of August 26, 1994. Other than the minor portion of Site G (1 acre) for which Cerro has responded, Cerro is limiting its response to Sauget Sites Area 1 - Site I and Dead Creek Segment A, as Cerro has no knowledge or information suggesting a direct connection between its operations and any of the other Area 1 Sites.

Request 1

Identify all persons consulted in the preparation of the answers to these information requests.

Answer 1

Below is a listing of those persons Cerro consulted in preparation of this information request:

a) Joseph Grana, current Manager of Environmental, Energy and Health Services Group.
b) Paul Tandler, former Vice President, currently retired.
c) Dave Durham, current Purchasing Manager.
d) Robert Conreaux, current Vice President of Manufacturing.
e) James Matcuk, current Vice President.
f) Dave Cornell, current Senior Project Engineer.
g) Bob Claywell, current Senior Project Engineer.

Request 2

Identify all documents consulted, examined, or referred to in the preparation of the answers to these Requests, and provide copies of all such documents, clearly indicating on each document the question(s) to which it is responsive.

Answer 2

Cerro is either producing with this response those documents responsive to the Requests or has identified such documents by reference to the alpha-numeric system and descriptions in the indices provided to the Agency on August 26, 1994. Cerro will provide copies of those documents requested by the Agency.

Request 3

If you have reason to believe that there may be persons able to provide a more detailed or complete response to any Information Request or who may be able to provide additional responsive documents, identify such persons.

Answer 3

Cerro believes that since the Site I landfill was once owned and operated by Leo Sauget, the heirs of Leo Sauget could provide a more complete response to some of this Information Request.

Request 4

List the EPA Identification Numbers of the Respondent

Answer 4

Cerro's EPA Identification Number is ILD080018914.

Request 5

Identify all persons having knowledge or information about the generation, transportation, treatment, disposal or other handling of hazardous materials at the Site or at your facility, particularly those who worked for Cerro during the period prior to 1967.

Answer 5

Joseph M. Grana and Joe D. Burroughs could have knowledge or information in response to this question after 1989.

Paul Tandler and Sandy Silverstein could have knowledge or information in response to this question for periods prior to 1967.

Request 6

Identify and describe the acts or omissions of any persons, including your employees, contractors, or agents that caused or may have caused the release or threat of release of hazardous materials from the facility, as well as any damages resulting therefrom.

Answer 6

Cerro does not maintain specific records of events which may have caused releases of hazardous materials from the facility, but acknowledges that its process wastewater, sanitary wastewater, cooling water and stormwater runoff, some of which contained hazardous substances, was released into Dead Creek Segment A during the operation of its facility since 1927. Cerro wastewater documents that may be responsive to this request can be found at documents numbered C328-C1332, C1536-C1655, C3311-C3733 and C4888-C7763.

Cerro deposited on Site I internally generated construction debris, broken concrete, blast furnace slag, excess dirt from excavation within the plant, used furnace brick, cooling system solids and similar rubble, some of which may have contained hazardous substances. Because these materials were internally generated and disposed of on company-owned land, there are no shipping documents.

Request 7

Identify all persons, including yourself, who have arranged or may have arranged for disposal or treatment, or for the transportation for disposal or treatment, of hazardous materials or to the Site, with particulate attention to persons who performed these duties prior to 1967. In addition, identify the following:

a) The person(s) with whom you or such other person(s) made such arrangements;

b) Each date on which such arrangements took place;

c) For each transaction, the nature or the material, including the chemical content, characteristics, physical state (e.g., soil, liquid), and the process for which the hazardous material was used or the process which generated the material;

d) The owner of the material so accepted or transported.

e) The quantity of the materials involved (weight or volume) in each transaction and the total quantity for all transaction;

f) All tests, analysis, and analytical results concerning the materials.

g) The person(s) who selected the Site as the place to which the materials were to be transported;

h) The amount paid in connection with each transaction, the method of payment, and the identity of the person from whom payment was received;

i) Where the person identified in g., above, intended to have such materials transported and all evidence of this intent;

j) Whether the materials involved in each transaction were transshipped through, or were stored or held at, any intermediate site prior to final treatment or disposal;

k) What was actually done to the materials once they were brought to the Site;

l) The final disposition of each of the materials involved in such transactions;

m) The measures taken by you to determine the actual methods, means, and site of treatment or disposal of the material involved in each transaction.

n) The type and number of containers in which the materials were contained when they accepted for transport, and subsequently until they were deposited at the Site and all markings on such containers.

o) The price paid for (i) transport (ii) disposal or (iii) both of each material.

p) Copies of all documents containing information responsive to a - o above.

q) All persons with knowledge, information, or documents responsive to a - o above.

Answer 7

Due to the fact that the period in question, pre-1967, is over twenty five years ago, Cerro does not know who would have arranged for transport of hazardous materials to Site I. However, Cerro offers its responses to an August 7, 1989 Request for Information, Sauget Sites Area I & II dated October 10, 1989, in response to this Request 7, as it applies to Site I.

Prior to construction of a process wastewater interceptor sewer in 1965, portions of Cerro's process wastewater, sanitary wastewater, cooling water and stormwater flowed to Dead Creek Segment A. From there, Cerro's discharge generally flowed north into a 36" pipe that went from the northern end of Dead Creek under the Alton & Southern Railroad tracks and connected with a 24" Village sewer line that ran along the southern side of Monsanto's property. Cerro wastewater information for the period prior to the construction of the interceptor sewer can be found in documents numbered C02667-C02717 and VS0533-VS0539. In 1965 the Village constructed an interceptor sewer that collected Cerro's process discharges and pumped them through a junction box that was constructed at the northern terminus of Dead Creek, through the 36" pipeline and into the Village sewers.

This 36" line connected the Village sewers to Dead Creek as early as the 1940s. When the Village sewer system became surcharged with a heavy volume of wastewater or stormwater, the wastewater would backflow from the 24" Village line

through the 36" line into Dead Creek. When this backflow occurred, wastewater from other dischargers into the Village sewers in the area, the largest of which was Monsanto, entered Dead Creek. In addition, in these surcharge situations, Cerro's discharge was prevented from entering the Village sewer system, and instead, backed up into Dead Creek. Cerro is providing wastewater analysis typical of its discharge which would have been prevented from entering the Village sewer system after 1965 in documents C00311, C00328-C00435, C00957-C01332, C03299 and VS0541-VS0547 as shown in the August 26, 1994 document indices.

Request 8

Provide a detailed listing of products, including by-products, manufactured or produced at the facility for the time period between 1900 and 1982.

Answer 8

The following products and by-products were produced by Cerro:

a) Electrolytic copper cathode
b) Copper and brass ingot bars
c) Copper and brass billets
d) Copper and brass tube and pipe
e) Lead-tin solder string and bars
f) Zinc oxide baghouse dust (by-product)
g) Silver chloride salt (by-product)
h) Lead-tin refinery slimes (by-product)
i) Copper bearing reverberatory furnace slag (by-product)
j) Copper and lead blast furnace slags (by-product)

Request 9

Describe the manufacturing and recycling processes for the products that were manufactured at the facility during the time period.

Answer 9

The following are descriptions of past and present the manufacturing processes:

a) Sintering Operations (abandoned in the 1950's) - Processes used prior to blast furnace smelting to agglomerate dried lead-tin slimes (refinery by-product) or copper bearing fines into a "clinker" cake to avoid its being blown out of the blast furnace combustion chamber. The material is blended on a pallet conveyer, ignited with overhead burners, and air is blown upwards through the mixture of metal bearing charge materials, finely crushed coke and fluxes. The agglomerated material is discharged at the end of the conveyer, cooled and transferred to the respective blast furnace operations.

b) Copper Blast Furnace Operations (abandoned in 1960's) - The process was utilized to reduce reverberatory slags and other copper bearing materials containing low concentrations (20% - 30%) of cooper and its alloys to a more concentrated form. A tall

water cooled column is loaded alternately with coke (the fuel), copper bearing materials (the charge), and limestone (the flux). Blower air is injected through a set of tuyeres located in the lower portion of the column, thus combining chemically with the coke to form reducing gases that permeate through the charge, melting it, and reducing oxygen containing materials to a metallic form. The crucible below the furnace column is tapped for slag off the top of the molten bath, while the metallics, called "black copper" are tapped from, the bottom of the crucible into iron molds, and allowed to cool before transfer to the anode furnace operation.

c) Lead Blast Furnace Operations (abandoned in 1950's) - The process was utilized to convert dried and agglomerated by-products of the refinery (slimes) to metallic form, containing primarily lead and tin. The process is similar to the Copper Blast Furnace operation described above, except for the composition of the charge. The metallics tapped from the furnace crucible are collected in heated vessels (open pots under fume hoods) before blending to desired lead-tin alloys, then poured into water cooled molds for solidification and further processing into marketable products.

d) Copper Anode Fire Refining Furnace Operation - The fire refining process involves the removal of impurities from a high grade scrap copper (#2 copper). The molten copper is refined by blowing air into the molten bath which is called oxidation. The oxides of the impurities form a slag which is then removed by skimming the furnace. After the slag is removed the refined copper is deoxidized with green wood poles being pushed into the bath. Once the oxygen content meets specifications the copper is cast into anodes for further refining in the Electrolytic Refinery.

e) Electrolytic Copper Refining - The electrolytic copper refining process description can be found on page 84 - 86 of the deposition of Mr. Paul Tandler dated June 7, 1994.

f) Tankhouse Slimes processing and Drying - The slimes processing description can be found on page 152 and 153 of the deposition of Mr. Paul Tandler dated June 7, 1994.

g) Billet casting Operations - The billet casting operation is the process of melting copper or brass (past operation) and pouring it into water-cooled molds of various diameters, producing a solid pole called, a log. Once cooled the logs are sawed into 25 inch long billets.

h) Seamless Copper & Copper Alloy Tube & Pipe Production - To manufacture seamless tube and pipe, a billet is transferred to either a piercing mill or extrusion press. In the case of the extrusion press the metal is heated and place in the press. The forward motion of the press then pierces the billet with a mandrel and is then squeezed with 6,000 tons of pressure through a die. The result is a long shell which immediately enters a water trough thus cooling it. The shell is then transferred to bull blocks which draw down (reduce the diameter and wall thickness) of the shell. Once the tube is drawn to the specified size it is sent to straightening machines or recoilers. Finish tube is cut to length and in some cases cleaned to specification as required. The piercing mill process differs from extrusion by taking the heated billet and rotating it between two rolls while a revolving mandrel is piercing its center into a shell shape. Following piercing, the tube is then cooled, pickled, drawn down to the desired size, and formed into straight lengths or coils.

i) Solder Bar, Cake and String Production (abandoned in the 1950s) - The solder bar is when a properly blended lead-tin alloy is poured into open molds, water cooled from

below. The small bar or cake of solder is used in the plumbing industry for "leaded" cast iron soil pipe joints or similar end uses. The solder string product was commonly used in solder joints of copper tubing and various fittings and valves used in plumbing systems. It is manufactured when small diameter billets are cast from properly blended lead-tin alloy from the Lead Blast Furnace. The billets are cold extruded in a vertical press to produce the string solder, by forcing the metal through a die with a number of apertures, depending on how many strands are to be produced simultaneously. The emerging strands are coiled and then spooled to various weight packages for the end user.

Request 10

Identify the raw materials (e.g. scrap copper, copper wire, copper solutions, etc.) received, and the chemical additives and catalysts (both organic and inorganic) used to produce finished products at the facility.

b. Describe the nature of the substance, including the chemical content, characteristics, physical state (e g., solid, liquid), and;

c. Describe the process for which the substance was used or the process which generated the substance.

Answer 12

Without exhaustive effort and considerable time, Cerro cannot give detailed information regarding Request 12. Material Safety Data Sheets for materials used at Cerro can be found in documents numbered C01985-C01987 and C01333-C01404 as shown in the indices submitted August 26, 1994. Cerro raw material purchases are documented in "repeater cards" same of which are identified in the indices produced on August 26, 1994 as document numbers C02918-C02919, C02922, C02924-C02929, and C03089-C03174 and others of which were not referenced in such indices but which will be made available at a mutually convenient time. Cerro request the Agency be more specific in its request in order for Cerro to more fully comply with this request.

Request 13

How were contaminated soil, contaminated clothing/protective gear, and laboratory wastes handled and disposed of by the facility? Were these items commingled with waste products before disposal?

Answer 13

Prior to 1990, Cerro used Site I for the disposal of soils excavated on its property. It was not Cerro's practice to test materials deposited on Site I. Following 1990, soils excavated for construction of facilities were tested for contamination, and off-site disposal was determined based on the analysis. Soils deemed contaminated were disposed of in appropriate landfills.

Clothing used by manufacturing employees are sent to an industrial laundry. Protective gear such as gloves, boots and respirators are commingled with general factory trash.

Laboratory waste generated in Cerro's lab are either disposed of in the facility sewage system or through a lab pack disposal method.

Contaminated soil, clothing/protective gear and laboratory wastes from the removal action at Dead Creek Segment A were disposed of in one of the permitted landfills owned by Chemical Waste Management in Emelle AL, Lake Charles, LA or Calumet City, IL. These wastes were shipped with the contaminated soil which included its waste code. Additionally a final drum of PPE was shipped separately. Any lab waste not returned was disposed of by the lab, Gulf Coast Weston or Environmetrics.

Request 14

Describe the methods used at this facility to handle process wastewater and sanitary discharges prior to the facility hooking up to the Village of Monsanto's sewer system. When did the facility hook up to this system?

Answer 14

It is unknown exactly when wastewater containing portion of the plant's process and sanitary wastewater first flowed into Dead Creek Segment A but it may have been as early as 1928. Prior to 1965 portions of Cerro's process wastewater, sanitary wastewater and stormwater flowed to Dead Creek Segment A. In 1965, portions of Cerro's process wastewater and sanitary wastewater was hooked up into the Village of Monsanto's sewer system.

A detailed discussion of the Village sewer system can be found in a report dated September 1994 titled "Report on Investigations of Use of Dead Creek as a Surge Pond for the Village of Sauget Sewer System" by George M. Sallwasser of Horner & Shifrin, Inc. This report is attached as Exhibit A.

Request 15

Prior to the construction of the Village of Monsanto's sewer system, was it a practice of Cerro Copper or its predecessors (or other industries in the Village of Monsanto) to discharge process wastewaters, sanitary discharges, and/or liquid chemical wastes directly in Dead Creek? If so, describe the nature, volume, frequency, and cause of such discharges.

Answer 15

Prior to construction of a process waste interceptor sewer in 1965, portions of Cerro's process wastewater, sanitary wastewater, and stormwater flowed to Dead Creek Segment A. Additionally portions of the Village of Monsanto's industries also flowed into Dead Creek. A detailed discussion of the Village sewer system can be found in a report dated September 1994 titled "Report on Investigations of Use of Dead Creek as a Surge Pond for the Village of Sauget Sewer System" by George M. Sallwasser of Horner & Shifrin, Inc.

Specific wastewater information and analysis for the period prior to the construction of the interceptor sewer for Cerro can be found in documents numbered C02667-C02717 and VS0533-VS0539 as shown in the indices submitted by Cerro on August 26, 1994.

Request 16

Were any sanitary or process wastewaters discharged to Dead Creek after the construction of the Village of Monsanto's sewer system? If so, describe the nature, volume, frequency, and cause of such discharges.

Answer 16

Following the construction of the Village of Monsanto sewer system, when the Village sewer system became surcharged with a heavy volume of wastewater or stormwater, the wastewater would backflow into Dead Creek not allowing Cerro's discharge to enter the Village sewer system. Dead Creek served as a surge pond for the Village sewer system when it became surcharged during periods of moderate rainfall or heavy industrial discharges into the system. A detailed discussion of the Village sewer system can be found in a report dated September 1994 titled "Report on Investigations of Use of Dead Creek as a Surge Pond for the Village of Sauget Sewer System" by George M. Sallwasser of Horner & Shifrin, Inc.

Cerro is providing wastewater analysis typical of its discharge which would have be prevented from entering the Village sewer system during a surcharge event. This wastewater sampling and analysis information is found in documents C00311, C00328 - C00435, C00957 - C01332, C03299 and VS0541 - VS0547 as shown in the indices submitted by Cerro on August 26, 1994.

Request 17

Describe the methods used by Cerro Copper and its predecessors to dispose of solid waste generated from its furnaces at the facility. Were these solid waste materials used as cover material at Sites G, H, I and L in Sauget Area 1?

Answer 17

After diligent inquiry Cerro has discovered no information or documents and has no knowledge that suggests that solid waste generated from its furnaces was disposed of in Sites G, H or L. Solid waste generated from its furnaces was disposed of as fill in Site I and other low areas of Cerro's plant. These solid wastes consisted of blast furnace slags and used refractory brick which were internally generated.

Request 18

Describe the nature, characteristics and constituents present in the blast furnace slag and furnace brick which Cerro deposited in sites located within Sauget Area 2. Include all Material Safety Data Sheets for these materials and all analysis regarding their metals and/or hazardous substances content

Answer 18

After diligent inquiry Cerro has discovered no information or documents and has no knowledge of the exact nature, characteristics and constituents present in blast furnace slags but can suppose that it contained various quantities of metallics. Cerro's limited knowledge is based on the fact that its lead blast furnace was shut down in 1951 or 1952 and its copper blast furnace was shut down in 1969. Cerro is providing information

and analysis in Exhibit B on refractories currently in use which should not be substantially different from previously used refractory materials. Material Safety Data Sheets are found in the indices provided on August 26, 1994 under document numbers C01985-C01987.

Request 19

Provide all information and/or documents (other than property title information) supporting Cerro's listing of each "Possible Potentially Responsible Parties" in its correspondence to IEPA dated November 30, 1989, including any and all information concerning those parties activities in transporting waste to Area 1 sites via waste disposal contractors.

Answer 19

Cerro produced this information with its August 26, 1994 production to the Agency.

Request 20

Provide all RCRA Section 103(c) "Notification of Hazardous Waste Site" forms ever completed and/or filed by Cerro for the facility.

Answer 20

Cerro has not, to the best of its information or knowledge, completed or filed any such notification.

Request 21

In your March 28, 1990 Answer to an IEPA Information Request, you state in Answer 1 that process wastewater "may have contained metals as well as nonmetallics such as chlorides and calcium". Provide a specific list of metals and nonmetallics referenced in the Answer based on information in your possession or on the type of process operations which were occurring at the Cerro facility during this time frame.

Answer 21

Based on the knowledge of the operating facilities and wastewater sampling data, Cerro believes the following substances could have been found in Cerro's wastewater: calcium, cadmium, chlorides, chromium, copper, iron, lead, methylene chloride, nickel, selenium, silver, sulfates, tellurium, tin, thallium, trichloroethane, trichloroethene, zinc and mineral & synthetic lubricants and oils.

Furthermore, since Cerro dealt with scrap metals, it cannot discount the possibility that the following substances may have been present in small quantities in the wastewater: aluminum, antimony, arsenic, barium, beryllium, boron, cobalt, manganese, mercury and vanadium. Finally, groundwater infiltration into Cerro's sewers may have contributed various contaminants to Cerro's process wastewater analyses.

Request 22

There is no Request 22.

Request 23

Provide all documents and information in your possession relating to the drum incident which occurred on Cerro property on September 20, 1989, including the current status of any and all lawsuits filed as a result of this incident.

Answer 23

In Cerro's indices provided on August 26, 1994, documents numbered C01718-C01740 are responsive to this request.

The lawsuits from individuals involved in the incident are still pending.

Request 24

Were off-specification products treated as wastes at the facility? Provide information and documents concerning Cerro's treatment and disposal practice or policy concerning off-specification products.

Answer 24

Because Cerro is a fully integrated tube manufacturing operation, off-specification cathode, billets and tubing are re-melted and/or re-refined into usable product.

Request 25

As the Cerro facility evolved over the years, how has the disposal of obsolete process equipment been handled? Describe the disposition of such equipment.

Answer 25

Obsolete process equipment was sold or given to machinery or scrap dealers. Scrap metals such as stainless steel, carbon steel, cast iron, aluminum, etc was sold to scrap dealers.

Request 26

Were any hazardous materials generated or used at the facility ever disposed of on facility property? If so, describe the nature, volume, and location of such wastes.

Answer 26

In regards to Site I, Cerro disposed of internally generated construction debris, broken concrete, blast furnace slags, cooling system solids, excess dirt from excavation within the plant, furnace brick and similar rubble. Because these materials were internally generated and disposed on company-owned land, there are no shipping documents.

Aerial photographs from the fifties show that there was filling activity taking place on Cerro's plant property south of Old Queeny Rd, east of Mississippi Ave, north of New Queeny Rd and west of Dead Creek. Also there are indications of slag and brick use as fill and railroad ballast along the Alton and Southern Railroad Line on the northern border of Cerro's property.

Testimony by Paul Tandler indicated that portions Cerro's Tube Mill built in the late 1930's and early 1940's used slag as part of its foundation. Low areas were filled with slag to build up the foundation level.

Request 27

Were disposal activities referenced in Request 26, above carried out by Cerro employees or outside personnel or waste contractors? Identify all companies and individuals which carried out these activities.

Answer 27

It is believed that the disposal activities referenced in Answer 26 were performed by Cerro employees. Cerro cannot, at this time, identify those employees.

Request 28

Does Cerro disagree with the contention that at least a portion of the Sauget Area 1 sites contain wastes generated from the Cerro facility? If Cerro so disagrees, provide all information and documentation which supports this position.

Answer 28

Cerro does not disagree that portions of Sauget Area 1 Site I and Dead Creek Segment A contain wastes generated at Cerro.

Request 29

Identify all waste disposal contractors employed or used by Cerro for the period ending in 1967. Also

a. Describe how these disposal contractors handled Cerro non-hazardous materials, including the terms of any contractual arrangements with each;

b Describe how Cerro controlled where and how these waste disposal contractors disposed of these materials.

c Was it Cerro's practice or policy to dictate or choose where these materials would be disposed of or did Cerro leave the disposal of the materials up to its waste disposal contractors?

Answer 29

After diligent inquiry Cerro has discovered no information or documents and has no knowledge of any waste disposal contractors employed or used by Cerro for the period ending in 1967.

Request 30

Did Cerro or any of its consultants, agents, or contractors at any time secure the services of Leo Sauget or his company (later named "Industrial Salvage & Disposal, Inc.") to process, accumulate, treat, remove, haul or dispose of any hazardous materials or fly ash generated or used at the Cerro facility? If so, describe the nature of these services, when they were rendered, and all contracts or agreements associated with these services. In particular, describe the arrangement with this company regarding where these materials and/or fly ash were to be disposed of.

Answer 30

After diligent inquiry Cerro has discovered no information or documents and has no knowledge of using Leo Sauget or his company to process, accumulate, treat, remove, haul or dispose of any hazardous materials or fly ash generated or used at the Cerro facility.

Request 31

Did Cerro or any of its consultants, agents, or contractors at any time secure the services of Paul Sauget or Sauget & Company to perform any of the services referenced in Request 30, above? If so, describe the nature of these services, when they were rendered, and all contracts or agreements associated with these services. In particular, describe the arrangement with this company regarding where Cerro wastes and/or fly ash were to be disposed of

Answer 31

Cerro believes that Paul Sauget or Sauget & Company at one time performed work for Cerro but after inquiry has identified no documents, information or knowledge as to when or for what purpose Paul Sauget or Sauget & Company was used.

Request 32

Did Cerro or any of its consultants, agents, or contractors at any time secure the services of Harold Waggoner or Waggoner & Company to perform any of these services referenced in Request 30, above? If so, describe the nature of these services and all contracts or agreements associated with these services. Also describe the arrangement with this company regarding where these materials and/or fly ash were to be disposed of.

Answer 32

After diligent inquiry Cerro has discovered no information or documents and has no knowledge of using Harold Waggoner or Waggoner & Company to process, accumulate, treat, remove, haul or dispose of any hazardous materials or fly ash generated or used at the Cerro facility.

Request 33

Describe how the interceptor junction structure at the north end of Dead Creek in the sewer system worked after the hook up to the Physical/Chemical plant. Identify the number of bypasses of the interceptor system which have occurred and the volume of wastewater discharged in each bypass event. Describe under what conditions the bypasses occurred, as well as nature of the wastewater discharged and the area where these wastewaters went during and after bypass events. When was this bypass point closed and what prompted its closure?

Answer 33

The concrete junction structure at the north end of Dead Creek was constructed by the Village in or about 1965 as part of the project to intercept Cerro's discharges to Dead Creek. Water was pumped from the interceptor line through a pipe that led into the southern side of the structure. This water then "shot" across the structure into the 36" line that led under the Alton & Southern tracks and into the 24" Village sewer line. The eastern and western sides of the structure consisted of metal grating, such that when the Village sewers were surcharged and backflowing south through the 36" line, this backflow as well Cerro's flow into the structure could discharge through the sides of the structure into Dead Creek. Engineering drawings of the structure can be found at documents numbered C02517 through C02525 on the indices produced August 26, 1994. A detailed discussion of the Village sewer system can be found in a report dated September 1994 titled "Report on Investigations of Use of Dead Creek as a Surge Pond for the Village of Sauget Sewer System" by George M. Sallwasser of Horner & Shifrin, Inc., attached as Exhibit A.

Request 34

Identify and describe all discharges or spills to Dead Creek from the Cerro facility before and after the Village of Monsanto's sewer system was constructed

Answer 34

Specific wastewater discharge information and analysis for the period prior to the construction of the interceptor sewer for Cerro can be found in documents numbered C02667-C02717 and VS0533-VS0539 as shown in the indices submitted by Cerro on August 26, 1994.

Specific wastewater discharge information and analysis for the period after the construction of the interceptor sewer for Cerro can be found in documents C00311, C00328 - C00435, C00957 - C01332, C03299 and VS0541 - VS0547 as shown in the indices submitted by Cerro on August 26, 1994.

Request 35

Identify and describe all past and present solid waste units (e.g. waste piles, landfills, surface impoundments, waste lagoons, waste ponds or pits, tanks, container storage areas, etc.) on the Cerro facility property. For each solid waste unit identified, provide the following information

a. A map showing the unit's boundaries and the location of all known solid waste units, whether currently in operation or not. This map should be drawn to scale, if possible, and clearly indicate the location and size of all past and present units;

b. The type of unit (e.g. storage, spill containment, etc.);

c. The dates that the unit was in use;

d. The purpose and past usage (e.g. storage, spill containment, etc.);

e. The quantity and types of materials (hazardous substances and/or any other chemicals) located in each unit; and

f. The construction (materials, composition) volume, size, dates of cleaning, and condition of each unit

g. If the unit is no longer in use, when and how such unit was closed and what actions were taken to prevent or address potential or actual releases of waste constituents from the unit?

h. A complete description of any and all releases, or spills or leaks of hazardous substances, or any materials or liquids containing or contaminated with hazardous substances, from the unit.

Answer 35

Between 1955 and 1969 Cerro purchased several parcels of land totaling approximately 17 acres, located east of its main plant property. This land was used by Cerro from that time until March 1, 1991 as a landfill for inert material, generally concrete, metallics, brick, construction and demolition debris and cooling system solids. Cerro also uses the land for the storage of its copper tube products in trailers, parking of empty trailers, concrete truck washout, storage of salvageable and usable equipment and at times a reclamation storage area for used refractory brick. It is estimated that during the 37 years Cerro has owned at least a portion of the land, Cerro has placed between 1 and 8 feet of cover over the 17 acres depending on the slope of the land. Documents related to the landfill and its closure are provided in Exhibit C. Prior to Cerro owning the property, the land was used by the previous owner as a gravel pit/landfill area. Discussions on the previous owner's activities and analysis of contamination are found in the Ecology & Environment, Inc. report prepared for the IEPA dated May, 1988. Cerro has also sampled this area in the past and has installed groundwater monitoring wells. Further information can be found in documents numbered C07937-C07992 shown in the indices submitted by Cerro on August 26, 1994.

Sauget Sites Area 1 - Dead Creek Segment A - Cerro relies on its answers to Requests 7, 14, 15, 16, and 42 in response to this Request.

Incinerator - Until 1978, Cerro operated a solid waste incinerator to incinerate factory and waste oil when it was available. The location of the incinerator is shown in Exhibit D. Air pollution permit documents are provided in Exhibit E. These documents provide the technical details and operating requirements of the unit. It is unknown when the incinerator was installed. The building that was used to house the incinerator is now used as a waste oil and hazardous waste 90-day storage area.

Waste Oil & Hazardous Waste 90-day Storage Area - As stated above the Waste Oil and Hazardous Waste 90-day storage area is located where the old incinerator once was located. Exhibit D shows the current location. Located at the storage area is one 10,000 gallon tank for waste oil not contaminated with solvents and one 1500 gallon tank for storage of solvent contaminated waste oil which is considered hazardous waste. The tankage is protected by concrete containment. There are also varying amounts of storage of waste oil in barrels and portable tanks waiting to be classified before being picked up by a waste oil hauler for either oil reclamation or fuels blending. Chlorinated solvent still bottoms and spent solvent which is generated in the manufacturing operations are also stored in the containment area. Attached as Exhibit F are past IEPA RCRA inspection reports, Cerro's responses to minor NOVs and IEPAs compliance response. The still bottoms and waste solvent are picked up by a solvent reclaimer.

Factory Trash - Cerro collects general factory trash and refuse and stores it in a bin to either be loaded into a trash compactor or dumpsters for disposal at a local landfill. The location of the trash handling operation is shown in Exhibit D.

Solvent Still Operations - Cerro currently operates a solvent still in Bldg. 80. The still reclaims dirty trichloroethylene. The solvent is recirculated into a batch tube cleaning machine in a continuous loop. Still bottoms are removed manually and placed in drums for storage in the 90-day Hazardous Waste Storage Area as discussed above. In past years the

cleaning system used 1, 1, 1- trichloroethane and methylene chloride in addition to the trichloroethylene. In the Tube Mill, Cerro operated a solvent still until 1993 when it discontinued use of 1, 1, 1-trichloroethane for continuous tube cleaning. Dirty solvent (contaminated with oil, grit and dirt) was brought from straighteners and coiler satellite storage locations in the Tube Mill and Bldg. 80 where an operator pumped the barrels into a 1500 gallon tank for processing through the still. Periodically the still bottoms were removed manually and placed in drums for storage in the 90-day Hazardous Waste Storage Area as discussed above. Cerro discontinued use of the still in the Spring of 1993 when it was cleaned and disconnected from steam and storage tankage. The still remains in its current location. Materials removed from the abandoned still were removed manually and placed in drums for storage in the 90-day Hazardous Waste Storage Area as discussed above. The commencement of still operations is unknown. The locations of the stills and related tankage are shown on Exhibit D.

Main Plant Fill Operations - Depositions, aerial photographs and visual observation of plant buildings indicate that landfilling of slag and cooling system solids in low areas within the boundaries of Cerro's main plant occurred in the 1930's, 1940's, 1950's, and 1960's. This activity was done to build up the property to level grade for construction of buildings, primarily the Tube Mill, Bldg. 80 and the Receiving Department building. The amount or extent of this filling activity is unknown. However aerial photographs indicate it was discontinued by 1970 when the Receiving Building construction was completed. The general location of the filling activity, which is primarily under buildings, is shown in Exhibit G.

Provide copies of all local (e.g. Village or Sauget or Monsanto) environmental permits or licenses ever granted for the Cerro facility or any part thereof

Answer 36

Cerro is providing a copy the Village of Sauget American Bottoms Regional Wastewater Treatment Facility Wastewater Discharge Permit in Exhibit H.

Request 37

Provide the following information for chlorobenzenes, chlorophenols, chloroanilines, nitrophenols, nitroanilines, and PCBs:

a A description of whether and, if so, how the substance is or was generated and/or used at the facilities;

b An estimation of the quantity of the substance generated or used at the facilities;

c A description of Cerro's storage, treatment, and/or disposal policies or practices for each substance throughout the operating history of the facility;

d Any and all documents, reports, forms, permits or manifests indicating the substance's transportation to and/or disposal in Sauget Area 1 sites.

Answer 37

Cerro does not have documentation, information or knowledge of using chlorobenzenes, chlorophenol, chloroanilines, nitrophenols or nitroanilines in our facility. Cerro is only aware of using PCBs in its transformers and capacitors. Information relating to PCBs and electrical systems at Cerro's facility are found in documents numbered C00315, C00316, C01405-C01444, C01741, C01745-C1748, C02254. C02439 - C02495 in the August 26, 1994 indices provided.

However, Monsanto has indicated that a fire resistant hydraulic fluid Cerro used in small quantities called Pydraul would have contained PCBs. Cerro, has no first hand documentation or information regarding Pydraul's formulation.

Request 38

For each spill or discharge or release of any hazardous materials used or generated by the Cerro facility, including chlorobenzenes, chlorophenols, chloroanilines, nitrophenols, nitroanilines and PCBs, provide the following information:

a. Source of spill, discharge or release;

b. Concentration of the source;

c. Location of spill, discharge or release;

d. Type of material onto which spill or discharge occurred;

e. Area over which spill or discharge occurred;

f. Date of the spill or discharge;

g. Summary of any test results from area where spill or discharge occurred;

h. Diagram or map of spill or discharge area showing location of any sampling points;

i. Description of any cleanup activities and summary of any post cleanup verification sample results;

j. Disposition of any hazardous material from any cleanup;

k. All reports, memoranda, or analysis concerning the spill, discharge or release.

Answers 38

Cerro has permitted air and water pollution discharges. A map attached as Exhibit I shows the air pollution point sources and the wastewater treatment discharge locations.

Cerro has had spills typical of a non-ferrous manufacturing locations. These spills would include small quantities of oils, lubricants, cleaning solvents and electrolyte which would have been contained on the site and cleaned up or discharged to the sewer system. Due to the nature of these spills, no documentation exists.

Other than the pole drilling incident discussed in Answer 23 and routine wastewater treatment bypasses reported to the POTW, Cerro has not had a reportable spill that it is aware of. Cerro does not have documentation, information or knowledge of using chlorobenzenes, chlorphenol, chloroanilines, nitrophenols or nitroanilines in our facility. Cerro is only aware of using PCBs in its transformers and capacitors.

Request 39

For each pit, pond, lagoon, settling tank, oil/water separator, water treatment unit or similar structure located at the facility, provide the following information:

a. Location and description of these areas or structures;

b. Dates of any and all cleanings or removals of any material from these areas or structures. List most recent cleanings or removals first;

c. Reason for each cleaning or removal;

d. Description of methods employed for each cleaning or removal,

e. Description of any hazardous material removed, including PCBs, and quantity of material removed.

f. Concentrations of hazardous materials removed, including PCBs, released or discharged on or off site from these areas or structures;

g. Disposition of material removed;

h. Any test data, including PCB test data, concerning these areas or structures not associated with a cleaning or removal;

i. Identification and description of any release or discharge on or off site from these areas or structures.

j. Dates when release or discharges occurred;

k. Type of material and concentrations of releases or discharges;

l. Description of any cleanup activities for releases or discharges;

m. Summary of any post-cleanup verification sampling and disposition of material from the cleanup.

Answer 39

Settling Tanks & Water Treatment Units - Cerro has many settling tanks which are part of Cerro's wastewater treatment facilities. These facilities were permitted by the IEPA for construction and are permitted under the POTW Pretreatment Program. These locations are shown on the drawing in Exhibit I. Material is removed from these treatment facilities on a regular basis in the form of sludges which are recycled back into the Anode Furnace or reclaimed for their metal value. These facilities were constructed in 1988, 1990 and 1991. Wastewater discharges from these facilities occur daily to the Village of Sauget sewer system for further treatment. Because of the numerous sampling requirements for such wastewater treatment facilities, Cerro believes it would be best for the Agency that instead of producing copious amounts of documents, Cerro will make available for Agency review our discharge monitoring reports at the Agency's convenience.

Anode Casting Cooling Pond - As part of the Anode casting facility a cooling pond is used in the contact cooling water circuit. The location of the cooling pond is shown on Exhibit I. When Cerro was using deep well water, the amount of iron in the water caused the pond to fill with an iron sludge. The pond was drained and the sludge removed and landfilled on Cerro's property. Following the use of deep well water, the cooling water system became a closed loop system which used city water as makeup. Because the cooling water that enters this pond is in contact with the copper, copper oxides and copper particles are carried into the pond where they settle out. Also refractory based mold wash material which is sprayed on the mold as a parting agent, is carried by the cooling water into the pond and settles. Prior to the Anode facility becoming a zero wastewater discharge location in 1990, the water was drained to the sewer and the solids removed. Since 1990, a backhoe has been used to remove the copper particles. In both cases, the solids were or are placed in dumpsters next to the pond to drain and dry. After the solids are relatively dry, they are charged back into the Anode furnace because of their copper values. The cleaning takes places generally once per year. No records are kept on the dates of cleaning.

Billet Cooling System Hot & Cold Well Solids - On a periodic basis, usually annually, the hot and cold wells of the Billet Casting cooling water system require the removal of graphite solids that enter the cooling water system during casting. The location of these wells are shown on Exhibit I. This removal process requires the wells to be pumped down to the solids level. Prior to 1991, the solid slurry was pumped into a truck or removed manually and land disposed on Cerro's Site I property. After 1991, the wells were pumped down and the solids filter-pressed and sent to an off-site landfill. A copy of the solids analysis is in Exhibit J. No records are kept on the dates of cleaning and volume of solids which were land disposed.

Oil/Water Separator - **There are two oil water separators on Cerro's facility which were installed after 1990. The regulated discharge from the extrusion press operation in the Tube Mill and the East Outfall (12) both have oil separators. Their locations are shown on Exhibit I. The oil is skimmed from the surface and placed in tanks. When the tanks are full they are transported to the waste oil tanks for transfer to an oil reclaimer. The oil being separated from the wastewater is generally mineral type oil.**

Request 40

Provide a copy of any annual documents required to be kept for the facilities in accordance with 40 C.F.R. 761.180(a).

Answer 40

The Annual PCB Documents can be found in documents numbered C08594 - C08666 in the indices provided on August 26, 1994.

Request 41

Provide any information you have generated or gathered on groundwater flow and groundwater quality on or around the plants and/or on or around Sauget Area 1.

Answer 41

Responsive information can be found at the documents numbered C07937 through C07955, C277-1 through C277-11, C81-21 and C81-22 in the indices produced on August 26, 1994.

Request 42

Provide any information and documents you have generated or gathered (including documents obtained in discovery in the lawsuit captioned Cerro Copper Products Co. v. Monsanto Co., Docket No. 92-CV-204 WDS) about or in any way concerning the contamination found to exist in the Sauget Area 1, including any information concerning possible potentially responsible parties and/or the source of such contamination.

Answer 42

Cerro enclosed indices of documents that Cerro has produced to Monsanto from its own files or collected pursuant to third party subpoenas or FOIA requests in its August 26, 1994 response. As indicated in previous correspondence to the Agency, Cerro is precluded by a Protective Order from disclosing documents received from Monsanto.

Request 43

Describe all measures taken by Cerro or its consultants to characterize, measure, sample or in any way test for the presence of hazardous materials at or around Sauget Area 1. Provide the results of such testing.

Answer 43

The following document numbers in the August 26, 1994 indices are responsive to this request: C0004-C0005, C00016, C00044, C00115-C00116, C00123, C00133-C00156, C00273, C00283-C00285, C00287-C00288, C00301, C00395, C07937-C07955 and C07958-C07992.

Request 44

Provide copies of any sampling analytical reports which are responsive to any of these questions and clearly indicate on each analytical report copy of the question(s) to which it is responsive.

Answer 44

Cerro will provide copies of any sampling analytical reports which are requested by the Agency after its review of the August 26, 1994 indices provided by Cerro.

CERTIFICATION

I hereby certify that in responding to this information request, I have conducted a diligent search of current and historic company records and that I have interviewed current and past company employees. Based upon the foregoing, I further certify that the responses set forth above are true and correct to the best of my knowledge, information and belief.

Joseph M. Grana
Manger of Environmental, Energy
and Health Services Group
Cerro Copper Products Co.

Subscribed and sworn
to before me, this 12th
day of October, 1994

Patricia Pourchot
NOTARY PUBLIC

OFFICIAL SEAL
PATRICIA POURCHOT
NOTARY PUBLIC STATE OF ILLINOIS
MY COMMISSION EXP. APR. 26,1998

Exhibit A

Report on Investigations of Use of Dead Creek as a Surge Pond for the Village of Sauget Sewer System

By: George M. Sallwasser
Senior Consultant

Horner & Shifrin, Inc.
Engineers/Architect/Planners
St. Louis, Missouri

September 1994

REPORT ON INVESTIGATIONS OF USE OF DEAD CREEK AS A SURGE POND FOR THE VILLAGE OF SAUGET SEWER SYSTEM

By: George M. Sallwasser, Senior Consultant
Horner & Shifrin, Inc., Consulting Engineers St. Louis, Missouri

September, 1994

Introduction

Horner & Shifrin has been retained by the Cerro Copper Products Company through their attorneys, Lowenstein, Sandler, Kohl, Fisher & Boylan, to investigate the use of Dead Creek as a surge pond for the Village of Sauget sewer system. The investigation has been based on information available to us from our own files, as well as information furnished to us by others for this investigation. Horner & Shifrin has extensive information in its files as a result of a long history of involvement with the Village of Sauget sewer system, both directly for the Village itself, for clients connected to the sewer system, and agencies that had a interest in the sewer system.

Some of the clients and assignments we performed are listed below

1. In 1943 Horner & Shifrin was retained by the Lewin Metals Corporation (predecessor of Cerro Copper Products Company) to design a connection to a Village sewer from an existing sewer discharging to the Dead Creek Surge Pond.

2. In 1948, a report on the Village Sewer System was prepared for the Village of Monsanto (original name of the Village of Sauget). This report has been lost and has not been available for this investigation.

3. In 1952, a study entitled Report on Existing Sewerage System was prepared for the Village of Monsanto This report included a recommendation for expansion of the pumping station at the lower end of the system that discharges wastewater into the Mississippi River during high river stages.

4. Another assignment in 1952 for the Village of Monsanto included preparation of design plans for expanding the pumping station at the Mississippi River from 82 cfs to a 167 cfs and preparation of design plans for two 36-inch sewer lines to the new pumping station. This work was done in conjunction with Architectural-Engineers, Inc.

5. In 1953, a small sewage pump station was designed for the sewer on Little Avenue. The client was the Village of Monsanto.

6. In 1959, a Study of Pollution Abatement for The East Side Levee and Sanitary District was prepared. This study included the Village of Monsanto. Of particular interest for the current investigation are the measurements of the flow in the Village of Monsanto outfall sewer made as a part of that Study.

7. In 1964, the Village of Monsanto retained Horner & Shifrin to prepare a report which was entitled Development of Plan of Relief for Sewer System. The purpose of the Study was to develop a comprehensive plan of relief for the existing sewer system of the Village.

8. In 1965, the Village of Monsanto retained Horner & Shifrin to design the Dead Creek Pumping Station and Interceptor which were to collect and discharge to the Village Sewer System the wastewater from the Cerro Copper Products Company (then called Cerro Corporation) that at that time was being discharged to the Dead Creek Surge Pond.

9. In 1976, Horner & Shifrin personnel designed the 36-inch D Street Sewer for the Monsanto Company. This sewer connected to the 36-inch Village sewer at a manhole identified as Manhole 2-J by the Monsanto Company. This manhole is just east of Manhole 24.

10. The Village of Sauget retained Horner & Shifrin to assist them in their industrial waste control program from 1988 to 1991. This involved acting as the Pretreatment Coordinator for the American Bottoms Regional Wastewater Treatment Plant.

11. The Village of Sauget retained Horner & Shifrin in 1992 to prepare Plans and Specifications of an outfall sewer extension and multiport diffusion system for the American Bottoms Region Wastewater Treatment Plant.

In conjunction with carrying out the various assignments listed above, we obtained a variety of information to assist us. Much of this information remains in our files. This information included reports prepared by other engineering organizations and information from the individual companies utilizing the Village Sewer System. Of particular interest to us as we made this investigation were the Reports done in 1962 by Jos. W. Goldenberg, Consulting Engineer, who prepared a Report Upon Separation of Sewers in the Village of Monsanto and a series of Reports prepared by the Monsanto Company in 1962 and 1963 which analyzed the Village of Monsanto sewer system. These reports are in our files because they were utilized in the preparation of the report prepared by Horner & Shifrin in 1964 previously listed above.

The writer of this report had a major part in the preparation of the 1964 Horner & Shifrin Report, and was the project engineer for the 1965 design of the Dead Creek Pumping Station and Interceptor.

The Village Sewer System

The Village Sewer System has been a frequently changing system to accommodate the growth and needs of the industries located in the Village. Based on information in our files, and additional information provided to us during the course of this assignment, we have been able to generally reconstruct the growth of the system so that we could investigate the use of Dead Creek as a surge pond as these changes occurred. Unless otherwise identified, numbers used to identify manholes of the Village Sewer System are those assigned to them

in the 1952 Horner & Shifrin Report and used in subsequent reports by Goldenberg, Monsanto Company (1962) & Horner & Shifrin.

In 1932 an extensive system of sewers was designed by B.C. McCurdy, Consulting Engineers. These are the first public sewers that we have a record of in the Village which was incorporated in 1926. Apparently, prior to that time, development in the area was served by sewers constructed by the individual industries and by residents of the area.

The major sewers designed in 1932 which were constructed during that year and 1933, are shown on Attachment A at the back of this Report.

In 1942 major improvements were made to the Village system. These improvements consisted of building a new pumping station at the levee, a new outfall from this pumping station to the river, and an additional 36-inch line from the pumping station eastward to a manhole now identified as Manhole 2. Other significant improvements were made in 1945. By this time a 36-inch sewer, originally used as a culvert under the Alton and Southern Railroad tracks, had been connected to Manhole No. 24 and was used as an overflow to Dead Creek. It is not clear from our information when the portion of Dead Creek south of the Alton and Southern Railroad had been blocked so that it would serve as a surge pond for this overflow but it was accomplishing this function by 1943. Attachment B at the back of this report shows the general outlines of the system as we understand it existed in 1945.

In 1948 and 1951, more additions were constructed to the Village Sewer System to significantly increase the capacity of the sewer system to transport wastewater from the southern portion of the Village. Data available confirms that the 36-inch pipe under the Alton and Southern Railroad served as an overflow and that a surge pond along 19th Street also was in use to store peak flows the sewer system could not handle. This is the basic system that existed when Horner & Shifrin analyzed the sewer system and made recommendations for more improvements in the 1952 Report on Existing Sewerage System. This system of sewers is shown on Attachment C at the back of this Report.

As a result of recommendations in the 1952 Report, the Pumping Station at the Mississippi River was essentially doubled in capacity and two additional 36-inch lines from the Pump Station to Manhole 2 were constructed in 1953, as well as some other minor sewer extensions. The improvements constructed were only a few of the recommended improvements in the 1952 Report.

No significant additional improvements were made to the sewer system between 1953 and 1965. From 1962 through 1965, three major reports were prepared to consider future improvements to the system. In March of 1962 Jos. W. Goldenberg, Consulting Engineers, made a study entitled Report Upon Separation of Sewers in the Village of Monsanto. This Study was prepared for the Monsanto Chemical Company. In December of 1962 the engineering staff of the Organic Chemicals Division, of Monsanto Chemical Company issued Report No. 5 of Job EA No. 4-276. The stated purpose of this Report was: "To determine the adequacy of the existing Monsanto Village sewers, and where additional sewers should be located, if and when they are required..." In 1964 Horner & Shifrin was retained to prepare a report for the Village of Monsanto entitled Development of Plan of Relief for Sewer System. The major components of the sewer system as existing when these three reports were being prepared is shown as Attachment D at the back of this Report except that, in addition, the Dead Creek Pumping Station and Interceptor that were constructed in 1966 as a result of the recommendations of the 1964 Horner & Shifrin Report are also shown.

After 1966, we are aware of no substantial changes to the Village Sewer System that were made for over fifteen years. Some changes to the various industrial sewers to make it possible to measure and sample the wastewater discharge from their plants are believed to have been made and there is information indicating that the Dead Creek Surge Pond was reduced in length by blocking the culvert under Queeny Avenue around 1968 or 1969. Also during this fifteen year period, Federal and State laws required that the wastewater discharged from the Village Sewer System be treated. This resulted in major construction for wastewater treatment facilities.

The construction of the treatment plants had an important effect on the Village Sewer System. The cost for treating wastewater and the need to control the quality of the wastewater discharged to the sewer system made it desirable and/or necessary for the industries to reduce the process wastewater they produced and discharged to the sewers.

The first treatment plant was constructed in 1967. In 1977 this plant was upgraded to meet more stringent effluent requirements including providing some treatment for stormwater. In 1987 a Regional Treatment Facility was constructed. The treated wastewater from the Village of Sauget treatment plant was required to be discharged to this facility to receive additional treatment before being discharged to the Mississippi River.

During 1984, the Monsanto Company planned to construct a 42-inch sewer to parallel the Village sewers from Manhole 19 to Manhole 26. This new sewer was designed to receive almost all of the Monsanto Company's wastewater that previously was discharged to the Village sewers in this location. The new Monsanto Company 42-inch sewer significantly increased the capacity of the Village sewers for the remaining industrial and residential flows to be discharged to them between Manhole 10 and Manhole 26.

During 1990, the Dead Creek Surge Pond north of Queeny Avenue was filled in and no longer was available to receive and/or store wastewater and/or stormwater. Cerro Copper Products Company constructed a stormwater detention basin to receive stormwater from their plant at this time.

Investigation of Potential Overflow to Dead Creek Surge Pond from 24-inch Village Sewer at Manhole 24

Period from 1953 thru 1965

A substantial amount of data is available on the Village Sewer System during this period of time. Because of this, there is the opportunity to investigate in detail the operation of the

sewer system and when overflows could, and would have occurred to the Dead Creek Surge Pond via the 36-inch overflow pipe under the Alton and Southern Railroad tracks.

As indicated above, during this time the configuration of the sewer system, as shown on Attachment D, remained relatively constant. Data in the various reports available document the wastewater and stormwater flows discharged to the sewer system from the various industries and the residential area did not vary substantially between 1960 and 1964. It seems reasonable to assume that this was essentially true for the entire time period.

The 1962 Monsanto Chemical Company Report analyzed the Village Sewer System under a variety of flow conditions, one of which was considered to be the existing average dry weather flow (55.3 cfs). Other reports analyzed the system under dry weather flow but for projected future peak flows rather than existing flows. Since the Monsanto Report used existing dry weather flow, this analysis is particularly helpful and is discussed below.

This Monsanto Company analysis concluded that the 24-inch Village sewer at the junction with the 36-inch overflow to Dead Creek (Manhole 24) would not discharge to Dead Creek during average dry weather flow but that the water surface would be right at the elevation where discharge to Dead Creek could start. The flows used in this analysis were consistent with the average weekday flow measurements as reported in the 1959 Horner & Shifrin report (36.2 mgd or 56.0 cfs) prepared for The East Side Levee and Sanitary District but not the peak dry weather flows that were recorded. These measured peak dry weather flows (39.2 mgd or 60.6 cfs) recorded by Horner & Shifrin were approximately 10% higher than the average flow.

The basis of the hydraulic computations, i.e., the "n" value for pipe frictional computations used in the Monsanto Company Report, was questioned by Metcalf & Eddy, Engineers, in a Report for the Village of Monsanto dated March 5, 1965 entitled Conveying of Storm and Waste Water from the existing Village Pumping Station to the Proposed Corps of Engineers Pumping Station. Metcalf and Eddy expressed the opinion that the value used in the Monsanto Company Report resulted in calculating too little friction in the sewer system.

Based on Metcalf & Eddy's evaluation, the hydraulic gradient would be between two feet and three feet higher at Manhole 24 than indicated in the Monsanto Company Report. This increase would make it possible for dry weather wastewater from Manhole 24 to overflow to Dead Creek.

Flow measurement made by Rickman, Egerly, Burbank & Associates in 1962 provided data that seems to confirm the Metcalf & Eddy evaluation that pipe friction calculated in the Monsanto Report was too small. Hydraulic gradients at Manhole 19, with flows in the 24-inch and 30-inch sewers comparable to those used in the Monsanto Company Report, indicated the measured hydraulic gradient in the 24-inch sewer was higher than calculated in the Report by 10-inches to 12 inches. Part of the increased hydraulic gradient in the 24-inch sewer was due to the split in flow between the 30-inch sewer and the 24-inch sewer

Computations made during the course of this investigation also confirmed the conclusions expressed in the Metcalf and Eddy Report. These computations indicate a calculated depth at Manhole 24 that is 12 inches higher for the same flows used by the Monsanto Co.

On November 8, 1965 during a period without substantial rainfall in the area, the hydraulic gradient in Manhole 24 was measured by Horner & Shifrin personnel to be 24-inches above the bottom (invert) of the 36-inch sewer to Dead Creek. This hydraulic gradient was thought by Monsanto Company to be caused by deposits in the 24-inch Village sewer and that cleaning the sewer would lower the hydraulic level at Manhole 24. Whatever the reason for the observed condition, this demonstrates that the water surface actually attained an elevation in the Village sewer during dry weather that could cause overflow to Dead Creek through the 36-inch sewer.

Finally, in a letter dated November 13, 1964 from Mr. Silverstein of Cerro Corporation to Mr. Goldenberg, Mr. Silverstein stated, "Dead Creek has been used for ponding and surge storage for a number of years and the vast majority of the time the level of Dead Creek is very close to the top of the 36-inch conduit which connects it with the Village sewers...."

In order for flow to go from Manhole 24 through the 36-inch overflow into the Dead Creek Surge Pond, two conditions must occur:

1) The hydraulic gradient (water surface level) in Manhole 24 must be above the highest point of the bottom (invert) of the 36-inch pipe; and

2) The water level in the Dead Creek Surge Pond must be below the hydraulic gradient in Manhole 24.

During the time period being considered , under average dry weather flow, some of the wastewater from the Cerro Copper Products plant was entering the Dead Creek Surge Pond and flowing into the Village Sewer System through the 36-inch pipe from the Dead Creek Surge Pond to Manhole 24 A flow of 2.6 cfs from Cerro Copper Products is the value used by Monsanto Company and we concur is an appropriate value to use.

An investigation was made to determine what the water level would have to be in the Dead Creek Surge Pond to allow this 2.6 cfs of Cerro flow to enter the 36-inch sewer. Two different conditions were investigated

1. Assuming the water level in Manhole 24 is 10.5 inches higher than the invert elevation of the 36-inch overflow at Manhole 24 (6 inches above the invert elevation of the 36" overflow in the south end).

2. Assuming the water level in Manhole 24 is 13.5 inches higher than the invert elevation of the 36-inch overflow at Manhole 24 (9 inches above the invert elevation of the 36-inch overflow on the south end).

The Hydro Calc Circular Channel Analysis Computer Program Version 1.5 by Dodson and Associates was used for the computations.

Condition 1 assumes the water level in Manhole 24 is about 6 inches higher than computed in the Monsanto Company Report. Condition 2 assumes the water level is 9 inches higher than computed in the Monsanto Company Report.

Under Condition 1, the water level in the Dead Creek Surge Pond would have to be about 3 inches higher than the water level in Manhole 24 to allow the 2.6 cfs flow form Cerro to enter Manhole 24.

Under Condition 2, the water level in the Dead Creek Surge Pond would have to be only about 1 inch higher than the water level in Manhole 24 to allow the 2.6 cfs flow from Cerro to enter Manhole 24

Under these conditions, even a minor increase in the flow to the Village system of 3% or less would make the wastewater hydraulic gradient (water level) in Manhole 24 rise above the elevation in the Dead Creek Surge Pond and the direction of the flow would reverse and go from Manhole 24 to the surge pond. The rate of flow into the Dead Creek Surge Pond would depend on how high the water level in Manhole 24 got in relation to the water level in the surge pond.

It should be noted that if the hydraulic grade in Manhole 24 constantly stayed at a high elevation, e.g., the elevation noted on November 8, 1965, the flow out of Manhole 24 and the Cerro plant flow into the Dead Creek Surge Pond would raise the water level in the surge pond until eventually the flow from Manhole 24 would stop and the flow from the Dead Creek Surge Pond would again start entering the 36-inch pipe.

Based on the above information, it is clear that during the time period from 1953 to 1965 conditions could and did exist for dry weather flow from the Village sewer at Manhole 24 to enter the Dead Creek Surge Pond from time to time. Although conditions could exist at any time for this to happen, one obvious scenario would be for the water surface in Manhole 24 to be 9 inches or more above the high point of the invert elevation of the 36-inch pipe into the Dead Creek Surge Pond due to normal dry weather flow into the Village Sewer System.

The level in the Dead Creek Surge Pond would be about 1 inch higher to allow the flow from he Cerro plant to flow through the 36-inch sewer to the Village Sewer. During the weekend when the records indicate the flow discharged into the Village system would decrease, the water level in Manhole 24 would drop by about 12 inches. With this change, the stored liquid in the Dead Creek Surge Pond would start to enter the Village sewer and the water level in the Dead Creek Surge Pond would drop. On the following Monday when the flow increased in the Village Sewer System, the water level in Manhole 24 would rise again and flow would go from Manhole 24 to the Dead Creek Surge Pond. As the level in the Dead Creek Surge Pond increased due to the flow entering it, the flow out of the Village Sewer System would decrease and eventually stop and then reverse to let flow from Cerro again enter into Manhole 24.

A change from average flow in the Village Sewer System to a period of normal daily peak flow could also cause the hydraulic grade in Manhole 24 to rise sufficiently to cause the flow in the 36-inch pipe to reverse and discharge into the Dead Creek Surge Pond during the peak flow occurrence.

During periods of rainy weather, stormwater entered the sewer system. The rate of stormwater entering the Village sewers would depend on the amount of rain that occurred and the ability of the sewers to accept the additional flow over and above the dry weather flow it carried. Every study of the Village Sewer System we reviewed recognized that the system was inadequate for handling runoff from even moderate rainfall events without the use of surge ponds.

Normally, analyses are made for sewers serving this type of industrial area on the basis of a rainfall event that would occur on an average once every five years. The 1952 and 1964 Horner & Shifrin Reports and the 1962 Goldenberg Report used this criteria. Other factors for design include the area that would drain to the sewer and the imperviousness (character of the surfaces) of the area, and the time for the peak flow to occur. These factors result in a "PI" (also called "CI") value that indicates the amount of stormwater runoff from a specific

area. It is expressed in cubic feet per second per acre. The larger the value, the greater the rate of runoff.

In the 1962 Monsanto Company Report, they developed data for different rainfall/runoff conditions. Although the hydraulic computations of this Report are subject to the questionable "n" factor used as discussed previously, it is of interest to note that for one condition that was studied, a "CI" factor of 0.5 was used and it was concluded that "Dead Creek would receive a flow of 17 cfs from the south area with the water level reaching elevation 400.8 in 180 minutes". For a second condition a "CI" factor of 0.75 was used and it was concluded, "The south sewers discharge 39.5 cfs to Dead Creek where the water level will reach elevation 399.6 in 45 minutes". For a third condition a "CI" factor of 1.0 was used and it was concluded, "The south sewers are adequate, with a discharge of 54 cfs to Dead Creek where the water level reaches 399.8 in 45 minutes". Neither Horner & Shifrin nor Goldenberg agreed that the "CI" factors used by Monsanto Company in their Report represented large enough rates of stormwater runoff to be classified as a once in 5 year event; however, this Report does clearly show that during rainfall events, flow would enter the Dead Creek Surge Pond from Manhole 24. Some of the differences in the Horner & Shifrin and Monsanto Company evaluation of the appropriate "CI" factor to use is discussed on page 9 of the 1964 Horner & Shifrin Report.

The significant use of Dead Creek as a surge pond was expressed in the 1964 Horner & Shifrin Report (page 12) which stated, "Should the surge ponds no longer be permitted to receive polluted wastewater, yet maintaining the existing combined sewer system, all of the main sewers would require extensive supplementation. The most grossly overloaded section would be that through the Monsanto Company property between Mississippi Avenue and the north end of the Dead Creek channel".

To obtain a perspective of how often rainfall events would cause overflow into the Dead Creek Surge Pond, the measurements of flow made in 1959 for The East Side Levee and Sanitary District Report are helpful. During six weeks of measurement in the fall of 1958, precipitation occurred on 9 days. On the three days of greatest rainfall the total precipitation

did not exceed 1-inch for the entire day. (For comparison, a 1 Year Frequency storm of only 1 hour duration would have 1.35 inches or a 1 Year Frequency storm of 6 hour duration would have 2.12 inches. See Technical Paper No. 40 of US Weather Bureau). The effect of the precipitation can be identified by substantial increased flow in the sewers. On all three days the flow peaked at rates over 77 cfs (50 mgd) and once over 91 cfs (59 mgd). These rates of flow clearly would cause overflow into the Dead Creek Surge Pond considering that the system would only handle around 55 cfs without overflow as illustrated in the discussion of the dry weather flow conditions. Obviously, an overflow into the Dead Creek Surge Pond from Manhole 24 occurred many times in a year during the occurrence of rainfall. This conclusion is in full accord with the statement in the 1964 Horner & Shifrin Report (page 2), "Almost all of the system is surcharged during periods of moderate rainfall runoff and would be completely inadequate if two surge ponds were not presently available for the temporary storage of that portion of the flow which cannot be accommodated by the sewers".

It is appropriate to note that during the early 1960's, the Monsanto Company was very insistent that Dead Creek continue to be used as a surge pond to receive excess flows that the Village Sewer System could not handle during peak flows.

The Monsanto Company Report of December 1962 stated, "2. Elimination of Dead Creek and 19th Street pond facilities would require the addition of at least two new 60-inch sewers to carry storm runoff. It is not recommended that this be done at the present time".

After the completion of the 1964 Horner & Shifrin Report, the discussion of the recommendations of the Horner & Shifrin Report to eliminate Dead Creek as a surge pond for polluted wastewater indicated opposition from the Monsanto Company. In the minutes of a meeting of the Village industrial representative on June 8, 1965, it is stated, "Because of the general opposition of those present other than Stutz & Hodges *(Monsanto Company representatives)* to the Monsanto recommendation for the use of surge ponds, it was proposed that the plant managers of the Village industries meet and see if a Village sewer policy can be formulated".

The minutes of a second meeting on June 14, 1965 indicate the firm commitment Monsanto Company representatives had to the concept that Dead Creek remain in use as a surge pond. One of five Monsanto Company proposals that were presented as an effort "to break the deadlock" was: "(4) Provide an additional relief line from the Village sewers at the south end of the Monsanto Plant under the A&S tracks into Dead Creek..."

Cerro Corporation was in opposition to the policy of using Dead Creek as a surge pond. Mr. Silverstein of Cerro Corporation stated in a letter dated November 23, 1964 to Mr. Goldenberg "We therefore believe that any changes or modifications of the present (Village) waste disposal system should be taken in steps towards a direction that will eliminate the obnoxious environment of Dead Creek rather than contributing to it". The minutes of the two meetings of industrial representatives in June of 1965 reiterated the position of Cerro that Dead Creek should not be used as a surge pond. The minutes of the June 14, 1965 meeting record the following, "S. Silverstein restated Cerro's position that they believe the Village would have to eventually cease ponding of polluted wastes".

Period from 1966 to 1984

In 1966, the Dead Creek Pumping Station and Interceptor were constructed. These facilities were designed to remove Cerro Corporation's wastewater from the Dead Creek Surge Pond and discharge it into the 36-inch sewer going under the Alton & Southern Railroad tracks. Originally, it was the design concept to pipe the wastewater under the railroad tracks to a sewer on the north side of the railroad tracks. The design was modified at the request of the Monsanto Company. (See letter dated November 10, 1965 from George Sallwasser of Horner & Shifrin to Joseph Goldenberg.) The connection to the 36-inch overflow line was designed to allow the overflow of wastewater from Manhole 24 to Dead Creek to continue but the elevation that the overflow could start was raised 10 inches.

About this time (1966), the various industries started to implement process changes that reduced the quantity of wastewater discharge to the Village Sewer System. The impetus for this was the requirement for wastewater treatment of the flow from the Village outfall. For

example the Monsanto Company average dry weather flow to Manhole 19 in 1962 was listed as 31.6 cfs or 14,000 gpm. In 1972, the total flow from Monsanto Company was reported to be "slightly more than 7,000 gpm" and as of January 1, 1975, "...flow reduction projects were completed...reducing the total plant flow to 4,870 gpm." The data quoted is from Appendix A of a 1974 Year-End Status Report dated February 6, 1975 by M.R. Foresman of the Monsanto Company (CER 106705).

In 1970 Biodize System, Inc. was retained by the Village to measure and sample the flows from the various industries for the purpose of distributing the operating costs of the Village Treatment Plan among the various contributors. This report, dated December 1970, indicated that the total average wastewater flow was 23.836 mgd (36.8 cfs). In a report entitled Addendum to Facilities Plan and Infiltration - Inflow Analysis (Table 3, page 16) by P.H. Weis & Associates, Inc. and Rhutasel & Associates, Inc. dated February 1984, the average day dry weather flow to the Village treatment plant for 1983 was reported to be 8.33 mgd (12.9 cfs).

Because of the reduced dry weather flows discharged to the Village sewers, the Village Sewer System would have had capacity to discharge the dry weather flow without any expectation of a discharge to the Dead Creek Surge Pond. This assumes the sewer lines between the pumping station at the river and Manhole 24 were capable of operating at essentially their original capacity. The decreased dry weather flow also provided more capability for the transportation of stormwater flows before overloading the sewers to the extent that flow from Manhole 24 would discharge to the Dead Creek Surge Pond. This increased capacity available for stormwater flow would reduce the number of wet weather overflows into Dead Creek.

In 1981 when repairs to a manhole near Route 3 were necessary, P.H. Weis & Associates studied the effect of needing to close off one of the two sewers downstream of Manhole 21 to accomplish the repairs. There was a discussion about the capacity of one sewer to handle stormwater flows. In a letter report dated June 26, 1981 (CER 099669), Paul Weis wrote that whether one or two sewers was operating would have essentially no effect during a 20-year rainfall event since with both sewers operating with a hydraulic grade just at the overflow level

to Dead Creek, the stormwater runoff would be 10 times the capacity of the sewer. Based on this computation by Mr. Weis, it is obvious that a 1-year rainfall event, which would produce approximately 40% of the runoff of a 20-year event, would produce a stormwater runoff essentially four times the capacity of the two sewers (even without any dry weather flow) and therefore, there would be an overflow to the Dead Creek Surge Pond to take some of the excess flow.

Reviewing the data from the 1959 flow measurement previously mentioned, indicates that on the three days when rainfall caused significant increases in flow, the increased flow due to stormwater was 17 mgd (26 cfs), 20 mgd (31 cfs), and 31 mgd (48 cfs). It appears that the two smaller rainfall events might have been able to be transported by the Village Sewer System, but that the third rainfall event would have caused an overflow into the Dead Creek Surge Pond. This assumes no material change in the stormwater directed into the Village sewer between 1959 and 1981.

The data available indicates that during the period from 1966 to 1984, the occasions of overflow to Dead Creek decreased. Dry weather overflows into Dead Creek may have occurred during the first year or two, but by 1970 and thereafter, no overflows from Manhole 24 appear to have occurred during dry weather as long as the sewer system was functioning properly. During the 1982 flood season (which was a record flood at the time) the sewer system did experience substantial damage, but there is no information available to us to indicate that the sewers failed to function to adequately conduct the dry weather flow to the treatment plant or that any dry weather flow overflowed to the Dead Creek Surge Pond.

It is clear that the stormwater flows that resulted from even moderate rainfall continued to produced flows that the Village Sewer System could not handle without overflows from Manhole 24 to the Dead Creek Surge Pond. The frequency of overflows would have decreased over this time period due to the capability of the sewer system to receive more stormwater because the dry weather flow had decreased substantially. The deterioration of the sewer system during and after 1982 may have increased the occasion of overflow during

rainfall because of decreased sewer capacity due to the damage sustained by the sewers in the 1982 flood.

Period from 1985 to 1990

During this period of time, Monsanto Company constructed a 42-inch sewer to parallel the Village sewers from Manhole 10 to Manhole 26. During 1990, the Dead Creek Surge Pond was filled in and was no longer available to receive overflows from Manhole 24.

Little information is available to us about this time period, but after the 42-inch sewer was constructed by Monsanto, overflows to the Dead Creek Surge Pond were likely to occur only during significant rainfall events

Information that during rainfall events overflows to the Dead Creek Surge Pond did occur as late as 1990 is provided from the records of the Korte-Plocher Construction Company. On June 6, 1990 and again on August 15, 1990, while constructing the stormwater detention facility for Cerro Company, the Superintendent recorded on his Daily Job Report that "water from Monsanto" was coming into his work area for the Cerro project after rain started falling.

Period Prior to 1953

Not a lot of detailed information is available during this period but we have included the following information we do have to cover the entire period that the Village Sewer System existed as well as some time before this.

The 36-inch line under the Alton and Southern Railroad track was constructed in 1924 or 1925 to replace a trestle for the tracks across Dead Creek. Dead Creek was originally a free flowing drainage ditch flowing from north to south. It terminated in Cahokia Chute, a small channel of the Mississippi River around Arsenal Island. It extended northward into the City of East St. Louis and beyond. The Railroad installed the pipe, but by agreement with Monsanto

Company, the elevation of the new 36-inch pipe was placed below the bottom of Dead Creek to allow the existing Monsanto sewer pipe upstream to drain through the Railroad's 36-inch pipe.

By the early 1930's Dead Creek had been filled in south of Monsanto Avenue and buildings of the Monsanto Company erected on the fill. The 36-inch line under the Alton and Southern Railroad track provided for drainage of stormwater from the area between Monsanto Avenue and the Alton and Southern track to continue to drain southward through Dead Creek. Since there are no records of sewers in the area prior to 1932, it seems likely that before the Village Sewer System was constructed the industries located along Dead Creek south of Monsanto Avenue discharged wastewater flows into Dead Creek to drain to the Mississippi River.

The Village Sewer System design by B.C. McCurdy in 1932, shown in Attachment A, did not show any connection between the existing 36-inch pipe and the proposed Village Sewer System, although an 18-inch sewer from Mississippi Avenue to Dead Creek was designed and constructed just south of what is now Queeny Avenue and labeled as an overflow line. No detailed information is available on how the industrial sewers were connected to the Village system after it was constructed, but it is apparent that stormwater runoff, with or without being mixed with the industrial wastewater being produced in the area, had to be discharged to Dead Creek because of the inadequacy of the Village sewers to receive any substantial amount of stormwater runoff. In the custom of this time and place, the industrial wastewater and stormwater runoff frequently discharged to a single system of sewers with some provision for the sewers to discharge some of the combined wastewater and stormwater to drainage ditches during wet weather when stormwater flows occurred. It seems likely that industrial wastes were allowed to discharge to Dead Creek from time to time.

In 1935 a drawing of the Village Sewer System was prepared to indicate the capacity of the various Village sewer lines. This map does not show the 36-inch sewer under the railroad tracks or give any indications of an overflow from the 24-inch sewer Village line to Dead Creek.

The earliest indication available to us that the Village sewers were connected to the 36-inch line to Dead Creek is 1943. A survey had been made for an extension of a Lewin Metals Corporation (now Cerro Copper Products Company) sewer to connect it to the Village Sewer System east of Dead Creek, just south of the Alton and Southern Railroad. This survey shows the water surface in Dead Creek to be identical with the hydraulic gradient in the Village sewers, indicating that the two were connected. Subsequent to this, numerous drawings are available which shows the connection between the two. This information is consistent with the fact that in 1939 the Alton and Southern Railroad granted the Village permission to extend the original 36-inch pipe under the railroad tracks northward to connect to the 24-inch Village sewer.

The portion of Dead Creek between the Alton & Southern Railroad tracks south to Judith Lane was converted to a pond by blocking the flow under Judith Lane. When this was done has not been determined but by 1943 the Creek bed was accomplishing this because the water level in Dead Creek was approximately 2 feet higher than the culverts that otherwise would allow Dead Creek to drain to the south. The blockage at Judith Lane may have been accomplished at the same time the 36-inch line under the Railroad tracks was connected to the Village Sewer System.

We are not aware of any detailed information about dry weather flow during this period. The 1952 Horner & Shifrin Report discusses dry weather flows but only in the context of future flows to be used for design of additions to the sewer system in contrast to existing dry weather flows.

The 1943 survey indicates that the level in Dead Creek was 2 feet above the invert elevation of the 36-inch sewer. This indicates that this part of Dead Creek was serving as a surge pond for dry weather flow at this time. The multiple additions (1942, 1945, 1948 and 1951) to the original sewer system built in 1932 indicate that the system was not adequate for the growing use of the system. The extent to which Dead Creek operated as a surge pond during dry weather flows can only be a speculation with the information we have, but it seems evident that it did. This would be the explanation for the decision to convert the 36-

inch line under the Alton and Southern Railroad from a culvert to handle stormwater in Dead Creek to an overflow line for the 24" Village Sewer.

After the 36-inch line under the railroad tracks was connected to the Village Sewer System there was no outlet for stormwater north of the tracks to be drained out of the area except through the Village Sewer System. Since the 24-inch sewer could not begin to provide adequate capacity for this, any significant stormwater flow entering the original 24-inch Village sewer, even after being supplemented by the 30-inch sewer in 1945, would have had to overflow at Manhole 24, through the 36-inch line into Dead Creek.

The 1952 Horner & Shifrin Report stated that the then existing Village Sewer System was capable of discharging 76 cfs to the Pumping Station at the river. This analysis was based on allowing the water level in Manhole 25 to rise to a level more than 5 feet above the top of the 24-inch sewer. This elevation would only be attainable if the 36-inch overflow to the Dead Creek Surge Pond were not available. (The premise of the Horner & Shifrin analysis and recommendations was that there would be no connection from the Village Sewer System to Dead Creek.) Since the overflow was in existence and had been for at least 9 years, a flow of 76 cfs into the Village Sewer System would cause an overflow into the Dead Creek Surge Pond from Manhole 24. It was estimated that the amount of stormwater reaching the Village sewers at that time as a result of a 5-year frequency storm was 100 cfs (page 7) Based on this data, a 1-year frequency storm would produce on the order of 60 cfs of stormwater runoff. A flow of less than 50 cfs would cause the hydraulic gradient at Manhole 24 to be about 1 foot above the bottom of the 36" overflow to the Dead Creek Surge Pond and therefore could allow an overflow to Dead Creek Surge Pond.

From the above data, it is obvious that prior to 1952 there had been overflows into Dead Creek during wet weather

It is our conclusion from the information available that prior to 1932, wastewater from the industries in the Village along Dead Creek discharged these wastes to Dead Creek and flowed southward eventually reaching the Mississippi River. After the Village Sewer System

was constructed in 1932 and the connection made to the 36-inch pipe under the railroad track around 1939, it is reasonable to assume that there were times when the dry weather wastewater flow entered Dead Creek which was blocked to create a surge pond. The water level of Dead Creek shown on the survey made in 1943 indicates this, but no specific data confirms it. The repeated expansion of the system confirms there was a need to increase the capacity of the sewer system, but not necessarily to handle the dry weather flow.

Stormwater flow mixed with industrial wastewater would have entered Dead Creek during the period from prior to the construction of the Village Sewer System through 1952. The need to expand the system repeatedly certainly indicates this. During and immediately prior to 1952, the data available validates this conclusion for that specific period of time.

Summary of Conclusions

History of Dead Creek within the Village of Sauget

Dead Creek originally was a free flowing creek originating north of the Village of Sauget, flowing southward through the Village and continuing flowing generally southward about 5 miles to discharge into the Mississippi River at Arsenal Island.

In 1924 or 1925 a 36-inch culvert was installed under the Alton and Southern Railroad tracks to replace a wooden trestle. The Monsanto Company entered into an agreement with the Alton and Southern to install this new culvert below what was then the bottom of Dead Creek so that a sewer from the Monsanto Company into Dead Creek could drain through the new culvert. The change from a trestle to the 36-inch pipe which had much less capacity probably was due to the fact that part of Dead Creek north of the Alton and Southern tracks was filled in and the drainage that had gone to Dead Creek from north of Monsanto Avenue no longer entered Dead Creek. This was certainly the condition by the early 1930's at which time the Dead Creek channel had been filled in for about 1,000 feet south of Monsanto Avenue and used by the Monsanto Company for building sites.

After 1939, or shortly thereafter, when the 36-inch pipe under the Alton and Southern tracks was connected to the Village Sewer System at Manhole 24, all drainage due to rainfall from north of the tracks was eliminated from flowing southward under the tracks, except what entered the Village Sewer System and overflowed through the 36-inch pipe under the tracks.

At some time not know exactly, Dead Creek south of the Alton and Southern tracks was blocked at Judith Lane It would seem reasonable this would have been done in 1939 when the 36-inch pipe under the railroad was connected to the Village Sewer System. By 1943 this part of Dead Creek was acting as a pond with a connection to the Village Sewer System which controlled the water level in the pond.

Sometime in the middle or late 1960's the pipe under Queeny Avenue was plugged which reduced the length of the pond that was connected to the Village Sewer System. In 1990 the channel of Dead Creek between the Alton and Southern Railroad and Queeny Avenue was filled in as part of the clean-up of Dead Creek known as Hazardous Waste Site CS-A.

Wastewater Discharges to Dead Creek and Dead Creek Surge Pond within the Village of Sauget During Dry Weather

Prior to the construction of the initial Village Sewer System in 1932 and 1933, industries in the Village along the channel of Dead Creek discharged their wastewater into Dead Creek. No information is available about sewage from homes in the area. After the Village Sewer System was constructed, both the industrial and residential wastewater were discharged to this sewer system except for Lewin Mathes Company (a predecessor company to Cerro Copper Products Company) which continued to discharge some of its wastewater to Dead Creek. Some other industries south of the Alton and Southern Railroad may also have discharged some wastewater to Dead Creek. Prior to 1939 all wastewater discharges to Dead Creek would have flowed southward to the Mississippi River. No information is available on whether or not any wastewater from the industries connected to the sewer system entered Dead Creek at this time during dry weather due to inadequate capacity of the Village Sewer System.

By 1943, after the 36-inch pipe under the Alton and Southern Railroad was connected to the Village Sewer System and the Dead Creek channel was acting as a pond, it served as a surge pond for the Village Sewer System as well as a channel to conduct into the Village Sewer System wastes discharged directly into it. There is no detailed information available about dry weather flow to document what happened between 1939 and 1952. Since the Village Sewer System also changed frequently, the circumstances for creating overflows into the Dead Creek Surge Pond would have varied during this time. For these reasons, we cannot reconstruct what happened with regard to dry weather overflows to the Dead Creek Surge Pond during this period.

During the period from 1959 to 1965 substantial information is available. Furthermore, the Village Sewer System remained essentially unchanged. The data clearly indicates that Dead Creek served as a surge pond for overflows from the Village Sewer System via the 36-inch sewer under the Alton and Southern Railroad between Manhole 24 and the Dead Creek Surge Pond. Both hydraulic computations and actual observations substantiates this statement. Some wastewater from the Cerro plant continued to be discharged to the Dead Creek Surge Pond.

The Dead Creek Surge Pond was overtly considered a part of the Village Sewer System.

In 1966 the direct discharge of wastewater by Cerro Corporation into the Dead Creek Surge Pond was eliminated by the construction of the Dead Creek Interceptor and Pump Station. The overflow from the Village Sewer System, which then would have included the wastewater from Cerro that previously had been discharged directly to Dead Creek, would have continued to enter the Dead Creek Surge Pond from time to time due to a variety of circumstances. These dry weather overflows would have decreased in number after 1966 because the dry weather flow to the Village Sewer System started to decreased around 1967 from about 55 cfs to 36.8 cfs in 1970 and 12.9 cfs in 1984. It seems reasonable to assume that after 1970 no dry weather flows entered the Dead Creek Surge Pond except under unusual conditions., e.g., unusually large flows or maintenance of the sewer system. By 1990 the surge pond had been filled.

Information on Wastewater Discharges to Dead Creek and Dead Creek Surge Pond within the Village of Sauget During Wet Weather

Prior to the construction of the initial Village Sewer System in 1932 and 1933, all industrial wastes from industries along the channel of Dead Creek were discharged to Dead Creek in both wet weather as well as dry weather. After 1932 and up to 1939 no specific information is available but probably industrial wastes and rainfall runoff were collected in the same sewer system within the boundaries of the various industries. Since the Village Sewer System did not have capacity for much if any, rainfall runoff, the industrial sewers would have had to overflow to Dead Creek during wet weather. These overflows would have been a combination of stormwater and industrial wastes and would have flowed southward through Dead Creek to the Mississippi River. The 18-inch sewer line from Mississippi Avenue to Dead Creek, installed in 1932 as part of the Village Sewer System, would have served this purpose for the industries along Mississippi Avenue.

About 1939, after the 36-inch line under the Alton and Southern.was connected to the Village Sewer System at Manhole 24, the 36-inch sewer under the Alton and Southern Railroad would have served the same purpose as the 18-inch sewer line to discharge a combination of industrial wastes and stormwater runoff to Dead Creek.

By 1943 when Dead Creek was blocked from flowing southward to the Mississippi River, Dead Creek was acting as a surge pond. How often the combined stormwater and industrial wastewater overflowed up until the late 1940's is not known because the information on the dry weather flows and the amount of rainfall runoff reaching the sewers is not known. Because of the limited capacity of the Village Sewer System and the desire to utilize the 36-inch sewer under the Alton and Southern Railroad as an overflow for the Village Sewer System, it is likely that an overflow occurred even during minor rainfall runoff events

In 1951 additional sewers along Mississippi Avenue south of the Alton and Southern Railroad and to a point south of Queeny Avenue were constructed. At this time, the 18-inch overflow line from Mississippi Avenue was connected to the Village Sewer System so that normally

only stormwater would be discharged to Dead Creek and the industrial wastewater was discharged northward and stayed in the Village Sewer System.

Detailed data available for 1952 and the years immediately before this indicate that rainfall events of less than 1 year frequency would cause overflows to the Dead Creek Surge Pond through the 36-inch pipe under the Alton and Southern Railroad.

The substantial data available on the Village Sewer System from 1953 to 1965 makes it clear that rainfall events of a minor nature occurring many times a year, caused overflows into the Dead Creek Surge Pond. The Dead Creek Surge Pond was overtly considered a part of the Village Sewer System and essential to preventing flooding of plant sites during rainfall events. The continuation of this design concept was advocated and endorsed by Monsanto Company because it eliminated the need to construct extensive improvements to the Village Sewer System.

After 1966 when the dry weather flows into the Village Sewer System started to decrease the Village Sewer System had more capacity to receive stormwater flow. For this reason stormwater overflows would have decreased in frequency but even moderate rainfall events would have continued to cause overflows to the Dead Creek Surge Pond.

After 1984, increased sewer capacity further reduced the frequency of overflows to the Dead Creek Surge Pond but would not have ended them. An overflow in 1990 as the result of rainfall during the construction of the elimination of the Dead Creek Surge Pond demonstrated this.

MISSISSIPPI RIVER
EASTERN INNER HARBOR

RIVERVIEW AVE.
30" F.M.

PITZMAN AVE.

MONSANTO AVE.

PUMP STATION

36"

30"

36"

MISSISSIPPI AVE. (RT. 3)

30"

24"

18"

LOWER CAHOKIA RD.

24"

21"

18"

12"

18" OVERFLOW

QUEENY AVE.

DEAD CREEK

FALLING SPRINGS

12"

10"

8"

8"

LITTLE AVE.

QUEENY AVE.

NICKEL ST.

UPPER CAHOKIA ROAD

N

0 500 1000 FT.
SCALE

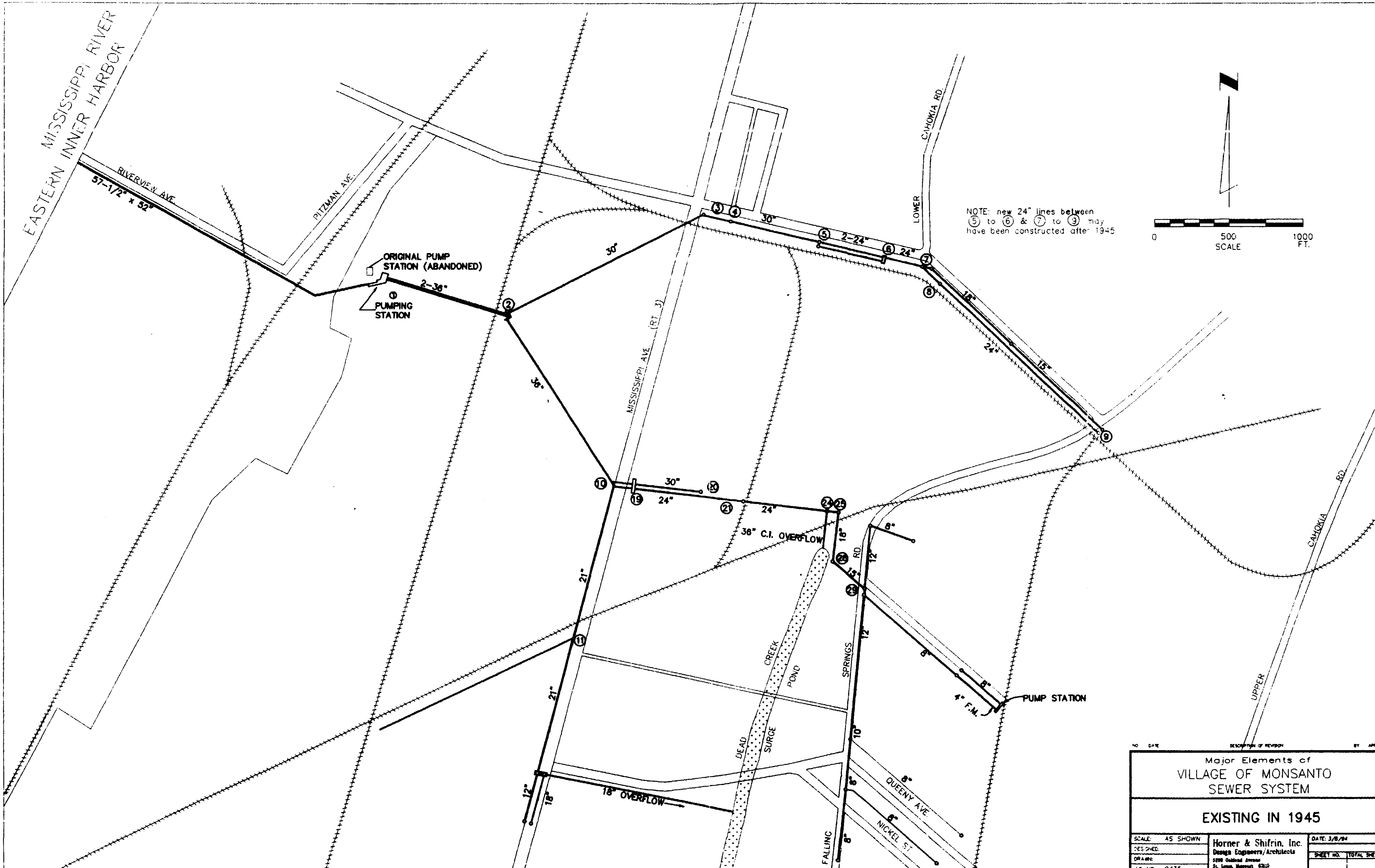
NO.	DATE	DESCRIPTION OF REVISION	BY	APPVD.

Major Elements of
VILLAGE OF MONSANTO
SEWER SYSTEM

EXISTING IN 1932

SCALE: AS SHOWN	Horner & Shifrin, Inc.	DATE: 8/3/94	
DESIGNED:	Design Engineers/Architects	SHEET NO.	TOTAL SHEETS
DRAWN: P.J.H.	8999 Gelstad Avenue		
H.S. NO. 9435	St. Louis, Missouri 63119		

ATTACHMENT "A"


MISSISSIPPI RIVER
EASTERN INNER HARBOR
RIVERVIEW AVE.
57-1/2" x 52"
PITZMAN AVE.
ORIGINAL PUMP STATION (ABANDONED)
2-36"
① PUMPING STATION
②
30"
36"
MISSISSIPPI AVE. (RT. 3)
③ ④ 30"
⑤ 2-24"
⑥ 24"
⑦
⑧
18"
24"
15"
⑨
LOWER CAHOKIA RD.
NOTE: new 24" lines between ⑤ to ⑥ & ⑦ to ⑨ may have been constructed after 1945
0 500 1000 FT.
SCALE
⑩ 30" ⑳
⑲ 24"
㉑ 24"
㉔ ㉕
36" C.I. OVERFLOW
18"
㉖
15"
㉙
RD.
12"
8"
12
8"
8"
4" F.M.
PUMP STATION
21"
⑪
21"
DEAD CREEK
SURGE POND
SPRINGS
10"
12"
18"
18" OVERFLOW
FALLING
8"
8"
8"
QUEENY AVE.
8"
NICKEL ST.
UPPER CAHOKIA RD.

NO.	DATE	DESCRIPTION OF REVISION	BY	APPV'D

Major Elements of
VILLAGE OF MONSANTO
SEWER SYSTEM

EXISTING IN 1945

SCALE: AS SHOWN
DESIGNED:
DRAWN:
H.S. NO. 9435

Horner & Shifrin, Inc.
Design Engineers/Architects
5200 Oakland Avenue
St. Louis, Missouri 63110

DATE: 3/8/94
SHEET NO. | TOTAL SHEETS

ATTACHMENT "B"

MISSISSIPPI RIVER
EASTERN INNER HARBOR
RIVERVIEW AVE.
51-1/2" x 32"
PITZMAN AVE.
MONSANTO AVE.
PUMPING STATION
2-36"
30"
2-36"
36"
30"
2-24"
24"
LOWER CAHOKIA RD.
18"
24"
15"
24"
19th St.
SURGE POND
0
500
1000
SCALE
FT.
30"
24"
30"
36"
24"
36" C.I. OVERFLOW
6" F.M.
15"
15"
PUMP STATION
18"
12"
15"
24"
21"
MISSISSIPPI
15"
18"
24"
21"
12"
18"
18" OVERFLOW
QUEENY AVE.
CREEK
DEAD
POND
SURGE
SPRINGS
12"
10"
LITTLE AVE.
8"
8"
8"
8" F.M.
PUMP STATION
UPPER CAHOKIA ROAD
8"
8"
8"
8"
QUEENY AVE.
NICKEL ST.
FALLING

NO.	DATE	DESCRIPTION OF REVISION	BY	APP'D.

Major Elements of
VILLAGE OF MONSANTO
SEWER SYSTEM

EXISTING IN 1952

SCALE: AS SHOWN	Horner & Shifrin, Inc.	DATE: 3/8/94
DESIGNED:	Design Engineers/Architects	SHEET NO. / TOTAL SHEETS
DRAWN:	5200 Oakland Avenue	
H.S. NO. 9435	St. Louis, Missouri 63110	

ATTACHMENT "C"

MISSISSIPPI RIVER
EASTERN INNER HARBOR

RIVERVIEW AVE.

57-1/2" x 52"

PITZMAN AVE.

MONSANTO AVE.

PUMPING STATION

4-36"

30"

2-36"

36"

MISSISSIPPI AVE. (RT. 3)

LOWER CAHOKIA RD.

30"

2-24"

24"

18"

24"

18"

19th ST.

N

0 500 1000 FT.
SCALE

10

30"

19

24"

20

36"

22

24"

21

26

24

25

27

8"

36" C.I. OVERFLOW

18"

12" F.M.

11

28

12"

15"

15"

DEAD CREEK PUMP STATION

15"

29

9" LITTLE AVE.

12"

12"

24"

21"

15"

16"

15"

24"

21"

DEAD CREEK POND

SPRINGS RD.

10"

8"

8"

PUMP STATION

UPPER CAHOKIA ROAD

DEAD SURGE

12" OVERFLOW

QUEENY AVE.

12"

16"

18" OVERFLOW

8"

QUEENY AVE.

8"

NICKEL ST.

FALLING

8"

12"

NO. DATE DESCRIPTION OF REVISION BY APP'VD

Major Elements of
VILLAGE OF MONSANTO
SEWER SYSTEM

EXISTING IN 1965

SCALE: AS SHOWN DES'SNED: DR'AWN: H.S. NO. 9435	Horner & Shifrin, Inc. Design Engineers/Architects 5200 Oakland Avenue St. Louis, Missouri 63110	DATE 2 AUGUST 1984 ATTACHMENT "D" SHEET NO. / TOTAL SHEETS

ATTACHMENT "D"

Exhibit B

ENVIRONMENTAL MONITORING AND TECHNOLOGIES, INC.

8100 North Austin Avenue
Morton Grove, Illinois 60053-3203
708/967-6666
FAX: 708/967-6735

LABORATORY REPORT

13038-C

Waste Management
Chain of Rocks
P.O. Box 1367
Granite City, IL 62040

Report Date: 4/11/91
Sample Received: 3/22/91

Generator: Cerro Copper
Sample No.: 5535
Sample Description: Fire Brick

pH (10% Solution)	9.86 (units)
Total Solids	99.4 %
Paint Filter	Pass
Physical Appearance	Brown Bricks
Water Reactivity	No Reaction
Ash Content	99.2 %
Total Cyanide	0.11
Reactive Sulfide	<2
Total Phenolics	<10
Flashpoint (open cup)	>212°F
Odor	None Distinctive
Acidity/Alkalinity	0.9 % as NH_4OH

	TOTAL	TCLP
Arsenic	<0.2	--
Barium	5.7	--
Cadmium	2.2	<0.1
Copper	80.	<0.1
Chromium	2900	0.18
Lead	280	<0.1
Mercury	<0.01	--
Nickel	380	<0.1
Selenium	<0.2	--
Silver	0.89	--
Zinc	43.	<0.1

All results expressed as ppm unless otherwise indicated.

Methods performed according to SW-846, "Test methods for Evaluating Solid Waste".

Karen Matchett

LABORATORY DIRECTOR

ENVIRONMENTAL MONITORING AND TECHNOLOGIES, INC.

8100 North Austin Avenue
Morton Grove, Illinois 60053-3209
708/967-6666
FAX: 708/967-6735

LABORATORY REPORT

13038-A

Waste Management
Chain of Rocks
P.O. Box 1367
Granite City, IL 62040

Report Date: 4/11/91
Sample Received: 3/22/91

Generator: Cerro Copper
Sample No.: 5535
Sample Description: Fire Brick

Compounds	Concentration Found In Sample	Concentration Found In Blank	Adjusted Concentration	Method Detection Limit (MDL)	Regulatory Limit
1. Benzene	<0.25	<0.01	<0.25	0.01	0.50
2. Carbon Tetrachloride	<0.25	<0.01	<0.25	0.01	0.50
3. Chlorobenzene	<50.0	<0.01	<50.0	0.01	100.00
4. Chloroform	<3.0	<0.01	<3.0	0.01	6.00
5. o-Cresol	<100.0	<0.01	<100.0	0.01	200.00
6. m-Cresol	<100.0	<0.01	<100.0	0.01	200.00
7. p-Cresol	<100.0	<0.01	<100.0	0.01	200.00
Total Cresol	<100.0	<0.01	<100.0	0.01	200.00
8. 1,4-Dichlorobenzene	<3.75	<0.01	<3.75	0.01	7.50
9. 1,2-Dichloroethane	<0.25	<0.01	<0.25	0.01	0.50
10. 1,1-Dichloroethene	<0.35	<0.01	<0.35	0.01	0.700
11. 2,4-Dinitrotoluene	<0.07	<0.01	<0.07	0.01	0.13
12. Hexachlorobenzene	<0.07	<0.01	<0.07	0.01	0.13
13. Hexachloro-1,3 -butadiene	<0.25	<0.01	<0.25	0.01	0.50
14. Hexachloroethane	<1.50	<0.01	<1.50	0.01	3.00
15. Methyl Ethyl Ketone	<100.0	<0.01	<100.0	0.01	200.00
16. Nitrobenzene	<1.00	<0.01	<1.00	0.01	2.00
17. Pentachlorophenol	<50.00	<0.01	<50.0	0.01	100.00
18. Pyridine	<2.50	<0.01	<2.50	0.01	5.00
19. Tetrachloroethylene	<0.35	<0.01	<0.35	0.01	0.70
20. Trichloroethylene	<0.25	<0.01	<0.25	0.01	0.50
21. 2,4,5-Trichlorophenol	<200.00	<0.01	<200.0	0.01	400.00
22. 2,4,6-Trichlorophenol	<1.00	<0.01	<1.00	0.01	2.00
23. Vinyl Chloride	<0.10	<0.01	<0.10	0.01	0.20

All results expressed as ppm unless otherwise indicated.

Methods performed according to SW-846, "Test Methods for Evaluating Solid Waste". Analysis performed on Extract from TCLP.

Leah E. Zehr

LABORATORY DIRECTOR

ENVIRONMENTAL MONITORING AND TECHNOLOGIES, INC.
9100 North Austin Avenue
Morton Grove, Illinois 60053-3203
708/967-6660
FAX: 708/967-6738

LABORATORY REPORT

13038-B

Waste Management
Chain of Rocks
P.O. Box 1367
Granite City, IL 62040

Report Date: 4/11/91
Sample Received: 3/22/91

Generator: Cerro Copper
Sample No.: 5535
Sample Description: Fire Brick

	Concentration Found In Sample (ppm)	Concentration Found In Blank (ppb)	Method Detection Limit (MDL) ug/L (ppb)	Quantitation Limit ug/L (ppb)
PCB 1221	<2	<0.08	1.6	5
PCB 1232	<2	<0.08	1.6	5
PCB 1016 (1242)	<2	<0.08	1.6	5
PCB 1248	<2	<0.08	1.6	5
PCB 1254	<2	<0.08	1.6	10
PCB 1260	<2	<0.08	1.6	10
(Total PCB)	<2	<0.08	1.6	---

All results expressed as ppm unless otherwise indicated.

Methods performed according to "Test Methods for Evaluating Solid Waste"

ENVIRONMENTAL MONITORING AND

ENVIRONMENTAL MONITORING AND TECHNOLOGIES, INC.

8100 North Austin Avenue
Morton Grove, Illinois 60053-3209
708/967-6600
FAX: 708/967-6738

LABORATORY REPORT

13038

Waste Management
Chain of Rocks
P.O. Box 1367
Granite City, IL 62040

Report Date: 4/11/91
Sample Received: 3/22/91

Generator: Cerro Copper
Sample No.: 5535
Sample Description: Fire Brick

SOLVENTS UNDER GENERIC NUMBERS F001 F002 F003 F004 F005

		Sample #5535	Blank	Detection Limit
F001	Tetrachloroethylene	<100	<0.005	0.005
	Trichloroethylene	<100	<0.005	0.005
	Methylene Chloride	<100	<0.005	0.005
	1,1,1 - Trichloroethane	<100	<0.005	0.005
	Carbon Tetrachloride	<100	<0.005	0.005
F002	Tetrachloroethylene	<100	<0.005	0.005
	Methylene Chloride	<100	<0.005	0.005
	Trichloroethylene	<100	<0.005	0.005
	1,1,1 - Trichloroethane	<100	<0.005	0.005
	Chlorobenzene	<100	<0.005	0.005
	1,1,2-Trichloro-1,2,2 - Trifluoroethane	<100	<0.005	0.005
	Ortho - Dichlorobenzene	<100	<0.005	0.005
	Trichlorofluoromethane	<100	<0.005	0.005
	1,1,2 - Trichloroethane	<100	<0.005	0.005
F003	Xylenes	<100	<0.005	0.005
	Acetone	<100	<0.005	0.005
	Ethyl Acetate	<100	<0.005	0.005
	Ethyl Benzene	<100	<0.005	0.005

All results expressed as ppm unless otherwise stated.

Leah E. Zehner

MONITORING AND TECHNOLOGIES, INC.

6100 North Austin Avenue
Merton Grove, Illinois 60053-8203
708/967-6666
FAX: 708/967-6735

LABORATORY REPORT

13036

Waste Management
Chain of Rocks
P.O. Box 1367
Granite City, IL 62040

Report Date: 4/11/91
Sample Received: 3/22/91

Generator: Cerro Copper
Sample No.: 5535
Sample Description: Fire Brick

SOLVENTS UNDER GENERIC NUMBERS F001 F002 F003 F004 F005

		Sample #5535	Blank	Detection Limit
	Ethyl Ether	<100	<0.005	0.005
	Methyl Isobutyl Ketone	<100	<0.005	0.005
	n-Butyl Alcohol	<100	<0.005	0.005
	Cyclohexanone	<100	<0.005	0.005
	Methanol	<100	<0.01	0.01
F004	Cresols or Cresylic Acid	<100	<0.005	0.005
	Nitrobenzene	<100	<0.005	0.005
F005	Toluene	<100	<0.005	0.005
	Methyl Ethyl Ketone	<100	<0.005	0.005
	Carbon Disulfide	<100	<0.005	0.005
	Isobutanol	<100	<0.005	0.005
	Pyridine	<100	<0.005	0.005
	2 - Ethoxyethanol	<100	<0.01	0.01
	Benzene	<100	<0.005	0.005
	2 - Nitropropane	<100	<0.005	0.005

All units expressed as ppm unless otherwise stated.

Methods performed according to SW-846 "Test Methods for Evaluating Solid Waste".

Leah E. Zehner

TOTAL P.06

ENVIRONMETRICS
2345 Millpark Drive
Maryland Heights, MO 63043
(314) 427-0550

CERRO COPPER PRODUCTS
P.O. BOX 681
EAST ST. LOUIS, IL 62202

ATTN: JOHN STAPLES

INVOICE # 11197
PO # 92262

Refractory Brick

ANALYSIS RESULTS

SAMPLE ID: JMG-120590-1
LAB ID: 9012208

TEST PERFORMED	METHOD OF ANALYSIS	RESULTS
RCRA METALS ANALYSIS	SW-846 6010	TOTAL
ARSENIC		<5.0 ppm
BARIUM		20.5
CADMIUM		2.80
CHROMIUM		588
COPPER		22,700
LEAD		659
NICKEL		361
SELENIUM		<2.0
SILVER		4.40
ZINC		132
MERCURY	EPA 245.1	<0.10
IGNITABILITY (SETAFLASH)	SW-846 1020	>200 (F)
CORROSIVITY (pH)	SW-846 9040	10.3 (10%)
REACTIVE CYANIDE	SW-846 9010	<0.2 mg/kg
REACTIVE SULFIDES	SW-846 9030	<0.2 mg/kg
PHENOLS	SW-846 9065	<0.1 mg/kg
PAINT FILTER	SW-846 9095	NO FREE LIQUID (PASSED)
TOTAL ORGANIC HALIDES	SW-846 9020	<17 mg/kg
TOTAL SOLIDS		98.9 %

DECEMBER 17, 1990

WAYNE L. COOPER
LABORATORY DIRECTOR

ENVIRONMETRICS
2345 Millpark Drive
Maryland Heights, MO 63043
(314) 427-0550

CERRO COPPER PRODUCTS
P.O. BOX 681
EAST ST. LOUIS, IL 62202

ATTN: JOHN STAPLES

INVOICE # 11197
PO # 92262

ANALYSIS RESULTS

SAMPLE ID: JMG-120590-1
LAB ID: 9012208

TEST PERFORMED	METHOD OF ANALYSIS	RESULTS
TCLP EXTRACTION	SW-846 1311	
RCRA METALS ANALYSIS	SW-846 6010	EXTRACTION
ARSENIC		<0.5 ppm
BARIUM		0.18
CADMIUM		<0.05
CHROMIUM		0.06
LEAD		<0.2
SELENIUM		<0.2
SILVER		<0.1
MERCURY	EPA 245.1	<0.01

DECEMBER 17, 1990

WAYNE L. COOPER
LABORATORY DIRECTOR

ENVIRONMETRICS
2345 Millpark Drive
Maryland Heights, MO 63043
(314) 427-0550

CERRO COPPER PRODUCTS
P.O. BOX 681
EAST ST. LOUIS, IL 62202

ATTN: JOHN STAPLES

INVOICE # 11197
PO # 92262

TCLP VOLATILE ORGANIC ANALYSIS
METHOD SW-846 8240

SAMPLE ID: METHOD BLANK
LAB ID: VBLK345B

CAS NUMBER		DETECTION LIMIT	RESULTS
75-01-4	Vinyl Chloride	10 µg/l	ND µg/l
75-35-4	1,1-Dichloroethene	5	ND
67-66-3	Chloroform	20	ND
107-06-2	1,2-Dichloroethane	5	ND
78-93-3	2-Butanone	15	ND
56-23-5	Carbon Tetrachloride	5	ND
79-01-6	Trichloroethene	5	ND
71-43-2	Benzene	5	ND
127-18-4	Tetrachloroethene	5	ND
108-90-7	Chlorobenzene	5	ND
106-46-7	1,4-Dichlorobenzene	10	ND

TCLP SEMIVOLATILE ORGANIC COMPOUNDS
METHOD SW-846 8270

SAMPLE ID: TCLP BLANK
LAB ID: TCLP602#1

CAS NUMBER		DETECTION LIMIT	RESULTS
110-86-1	Pyridine	50 µg/l	ND µg/l
106-46-7	1,4-Dichlorobenzene	50	ND
95-48-7	o-Cresol	50	ND
106-44-5	m & p-Cresol	50	ND
67-72-1	Hexachloroethane	50	ND
98-95-3	Nitrobenzene	50	ND
87-68-3	Hexachlorobutadiene	50	ND
88-06-2	2,4,6-Trichlorophenol	50	ND
95-95-4	2,4,5-Trichlorophenol	250	ND
32-64-9	2,4-Dinitrotoluene	50	ND
118-74-1	Hexachlorobenzene	50	ND
87-86-5	Pentachlorophenol	250	ND

ND = BELOW DETECTION LIMIT

DECEMBER 17, 1990

WAYNE L. COOPER
LABORATORY DIRECTOR

ENVIRONMETRICS

2345 Millpark Drive
Maryland Heights, MO 63043
(314) 427-0550

CERRO COPPER PRODUCTS
P.O. BOX 681
EAST ST. LOUIS, IL 62202

ATTN: JOHN STAPLES

INVOICE # 11197
PO # 92262

TCLP VOLATILE ORGANIC ANALYSIS
METHOD SW-846 8240

SAMPLE ID: JMG120590-1
LAB ID: 9012208

CAS NUMBER		DETECTION LIMIT	RESULTS
75-01-4	Vinyl Chloride	100 µg/l	ND µg/l
75-35-4	1,1-Dichloroethene	50	ND
67-66-3	Chloroform	200	ND
107-06-2	1,2-Dichloroethane	50	ND
78-93-3	2-Butanone	150	ND
56-23-5	Carbon Tetrachloride	50	ND
79-01-6	Trichloroethene	50	ND
71-43-2	Benzene	50	ND
127-18-4	Tetrachloroethene	50	ND
108-90-7	Chlorobenzene	50	ND
106-46-7	1,4-Dichlorobenzene	100	ND

TCLP SEMIVOLATILE ORGANIC COMPOUNDS
METHOD SW-846 8270

SAMPLE ID: JMG-120590-1
LAB ID: 9012208

CAS NUMBER		DETECTION LIMIT	RESULTS
110-86-1	Pyridine	50 µg/l	ND µg/l
106-46-7	1,4-Dichlorobenzene	50	ND
95-48-7	o-Cresol	50	ND
106-44-5	m & p-Cresol	50	ND
67-72-1	Hexachloroethane	50	ND
98-95-3	Nitrobenzene	50	ND
87-68-3	Hexachlorobutadiene	50	ND
88-06-2	2,4,6-Trichlorophenol	50	ND
95-95-4	2,4,5-Trichlorophenol	250	ND
32-64-9	2,4-Dinitrotoluene	50	ND
118-74-1	Hexachlorobenzene	50	ND
87-86-5	Pentachlorophenol	250	ND

ND = BELOW DETECTION LIMIT

DECEMBER 17, 1990

WAYNE L. COOPER
LABORATORY DIRECTOR

ENVIRONMETRICS
2345 Millpark Drive
Maryland Heights, MO 63043
(314) 427-0550

CERRO COPPER PRODUCTS COMPANY
PO BOX 681
EAST ST. LOUIS, IL 62202

ATTN: JOE BURROUGHS

INVOICE #: 11795
PO #: 96057

ANALYSIS RESULTS

SAMPLE ID: FIRE BRICK - NEW 1/25/91
LAB ID: 9101767

TEST PERFORMED	METHOD OF ANALYSIS	RESULTS
TCLP EXTRACTION	SW-846 1311	
RCRA METALS ANALYSIS	SW-846 6010	EXTRACTION
CHROMIUM		0.16 mg/l
RCRA METALS ANALYSIS	SW-846 6010	TOTAL
CHROMIUM		2,500 mg/kg

FEBRUARY 8, 1990

WAYNE L. COOPER
LABORATORY DIRECTOR

Rush on TCLP (Metals)

PO: 92262

CHAIN OF CUSTODY - SOLID WASTE
CERRO COPPER PRODUCTS- SAUGET, ILLINOIS

SAMPLE NAME: Used Refractory Brick SAMPLE I.D #: JMG-120590-1

SAMPLING DATE: TIME: SAMPLER'S INITIALS

SAMPLE TRANSPORTATION

SAMPLE CARRIER: (sign) DATE: TIME:

SAMPLES REC'D By Lab (sign) DATE: TIME:

LABORATORY WORK

LABORATORY: Enviromentica PHONE:
ADDRESS: St. Louis MO CONTACT: Wayne Cooper

✓ TCLP METALS (8)	✓ PAINT FILTER TEST	✓ Phenol
✓ TCLP ORGANICS (25)	✓ IGNITABILITY (<140F)	TOC
✓ TCLP PESTICIDES(4)	✓ CORROSIVITY (pH OF 10% SOLN.)	✓ TOX or EOX
TCLP HERBICIDES(2)	✓ REACTIVITY (CN & Sulfide) Reactive	✓ Cr +6
✓ Arsenic (T)	✓ Total Solids (%)	PCB
✓ Barium (T)	✓ Mercury (T)	
✓ Cadmium (T)	✓ Nickel (T)	
✓ Chromium (T)	✓ Selenium (T)	
✓ Copper (T)	✓ Silver (T)	
✓ Lead (T)	✓ Zinc (T)	

Comments: 1. ALL ANALYSIS IS TO BE PERFORMED IN ACCORDANCE WITH SW846

Analysis Requested by: J M Grana

Problems or Question Please Call Representatives Below
Cerro Copper: Joseph Grana or Joe Burroughs (618)337-6000

Copy Distribution of Chain-of-Custody
Goldenrod:Sampler's Copy Pink:Transporter leaves @ Cerro after signing
Yellow:Lab's Copy White:Lab returns to Cerro after analysis

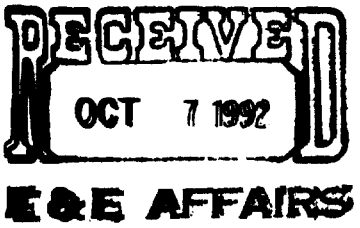
Exhibit C

Illinois Environmental Protection Agency · 2009 Mall Street, Collinsville, Illinois 62234

618/346-5120

October 6, 1992

1631210008 - St. Clair County
Sauget/Cerro Copper
FOS



Mr. Joseph Grana
Manager of Environmental
and Energy Affairs
Cerro Copper Products Co.
P.O. Box 66800
St. Louis, MO 63166-6800

Dear Mr. Grana:

As promised during my facility visit on September 25, 1992, I am enclosing the prints of five (5) photographs that I took at that time.

Thank you for the information and hospitality that you showed me. I appreciate your cooperation. If I can ever be of assistance to you, please advise.

Sincerely,

ENVIRONMENTAL PROTECTION AGENCY

Kenneth G. Mensing, Regional Manager
Field Operations Section
Bureau of Land

KGM:pbo/0899L

Enclosure

cc: Division File
cc: BOL - Collinsville

DATE: September 25, 1992

TIME: 11:03 a.m.

I.D. 1631210008

St. Clair County

Sauget/Cerro Copper

PHOTOGRAPH TAKEN TOWARD THE:

North

ROLL# 1926 PHOTO# 1

PHOTOGRAPH BY:

DATE: September 25, 1992

TIME: 11:06 a.m.

I.D. 1631210008

St. Clair County

Sauget/Cerro Copper

PHOTOGRAPH TAKEN TOWARD THE:

Northeast

ROLL# 1926 PHOTO# 3

PHOTOGRAPH BY:

DATE: September 25, 1992

TIME: 11:14 a.m.

I.D. 1631210008

St. Clair County

Sauget/Cerro Copper

PHOTOGRAPH TAKEN TOWARD THE:

South

ROLL# 1926 PHOTO# 4

PHOTOGRAPH BY:

DATE: September 25, 1992

TIME: 11:14 a.m.

I.D. 1631210008

St. Clair County

Sauget/Cerro Copper

PHOTOGRAPH TAKEN TOWARD THE

North

ROLL# 1926 PHOTO# 5

PHOTOGRAPH BY:

DATE: September 25, 1992

TIME: 11:04 a.m.

I.D. 1631210008

St. Clair County

Sauget/Cerro Copper

PHOTOGRAPH TAKEN TOWARD THE:

South

ROLL# 1926 PHOTO# 2

PHOTOGRAPH BY:

DATE:

TIME:

I.D.

County

PHOTOGRAPH TAKEN TOWARD THE:

ROLL# PHOTO#

PHOTOGRAPH BY:

CC: PT, REC, JDB, TC
Good News!! JMD

Illinois Environmental Protection Agency · P. O. Box 19276, Springfield, IL 62794-9276

217/785-8604

CC: Mike Rodberg
Thanks.
Joe

October 27, 1992

Cerro Copper Products
Post Office Box 66800
St. Louis, Missouri 61366-6800

RECEIVED
OCT 29 1992
E&E AFFAIRS

Re: 1631210008 -- St. Clair County
Sauget/Cerro Copper Landfill
Compliance File

Gentlemen:

On September 25, 1992, an inspection of your facility was conducted by field personnel representing the Illinois Environmental Protection Agency. This inspection was conducted in accordance with Sections 4(c) and 4(d) of the Illinois Environmental Protection Act. The purpose of this inspection was to determine your facility's compliance with the Illinois Environmental Protection Act and 35 Illinois Administrative Code, Subtitle G, Section 814.501(b).

Note | At the time of the inspection, your facility was found to be closed and no waste was being accepted. The Agency will conduct further inspections to determine compliance with your facility's closure plan.

Enclosed is a copy of the inspection report. Should you have further questions, please contact Ken Mensing at 618/346-5120.

Sincerely,

Glenn Savage

Glenn Savage, Manager
Field Operations Section
Division of Land Pollution Control
Bureau of Land

GDS:JEH:rlc/2680r/2682r

Attachment

STATE OF ILLINOIS
ENVIRONMENTAL PROTECTION AGENCY
INSPECTION REPORT

County ST. CLAIR Site Code 1631710008

Facility SAUGET / CERRO COPPER Region 6 Date SEPT. 25, 1992

Time: From 10:36 Am to 11:45 Am Photos Taken: Yes (#5) No ( )

Site Open: Yes ( ) No (✓) Inspector(s) KEN MENSING

Samples Taken: Yes (#___) No (✓) Groundwater (#___) Surface (#___) Other (#___)

Interviewed JOE GRAVA JOE BURROUGHS Weather ≈66° DRY Facility Phone No. 618 337-6000

OPERATIONAL STATUS:		TYPE OF OPERATION:		AUTHORIZATION:	
Operating	( )	Sanitary Landfill	( )	EPA OP Permit No.	
Temporarily Closed	( )	Special Waste Landfill	( )	EPA DE Permit No.	
Closed not Covered	( )	Quantity Received Daily		Other	7(d) PERMIT EXEMPT
Closed and Covered	(✓)	(1-6)	0	None	

SITE OBSERVATION

Failure to comply with the terms and conditions of permit(s) (Section 807.302 of the Regulations) ..... 1. ____

Failure to deposit refuse in the toe of the fill or into the bottom of the trench (Section 807.303(a) of the Regulations) ..... 2. ____

Inadequate spreading and compacting (Section 807.303(b) of the Regulations) 3. ____

Failure to maintain the proper ratio of the slope of the working face (Section 807.303(c) of the Regulations)..... 4. ____

Insufficient operable equipment ( ); personnel ( ); supervision ( ) available to comply with the permit, the Act or the Regulations (Section 807.304 of the Regulations) ..... 5. ____

Uncovered refuse remaining from any previous operating day or at the conclusion of any operating day (Section 21(o)(5) of the Act) ..... 6.* ____

Inadequate depth of daily cover (Section 807.305(a) of the Regulations) ... 7. ____

Inadequate depth of intermediate cover (Section 807.305(b) of the Regulations) ..... 8. ____

RECEIVED
- 2 OCT 1992
IEPA/DLPC

IL 532-0310
LPC 6 REV. 2/92

Inadequate depth of final cover (Section 807.305(c) of the Regulations) ... 9. _____

Failure to provide final cover within time limits established by Board Regulations
(Section 21(o)(6) of the Act and Section 807.305(c) of the Regulations) ... 10.*_____

Failure to collect and contain litter from the site by the end of each operating day
(Section 21(o)(12) of the Act and Section 807.306 of the Regulations) ..... 11.*_____

Causing or allowing salvaging: in an unsanitary manner ( ); in an area not remote from the operating face ( ); which interferes with or otherwise delays the operation of the landfill ( ); without removing salvaged materials daily or separating such materials by type and storage so as to create a nuisance, vector harborage or unsightly appearance ( ) (Section 807.307 of the Regulations) ..... 12. _____

Causing or allowing scavenging operations
(Section 21(o)(8) of the Act and Section 807.308 of the Regulations) ..... 13.*_____

Causing or allowing feeding of farm or domestic animals upon the site of the sanitary landfill or with refuse delivered thereto
(Section 807.309 of the Regulations) ..... 14. _____

Improper deposit, acceptance or handling of burning material at a sanitary landfill site (Section 807.310(a) of the Regulations) ..... 15. _____

Acceptance of wastes without necessary permits
(Section 21(o)(7) of the Act and Section 807.310(b) of the Regulations) ... 16.*_____

Open burning of refuse in violation of: Section 9 of the Act ( ); Section 807.311 of the Regulations ( ) (Section 21(o)(4) of the Act) ..... 17.*_____

Causing or allowing the operation of a sanitary landfill so as to cause or threaten or allow the emission of contaminants so as to cause or tend to cause air pollution in Illinois
(Section 9(a) of the Act and Section 807.312 of the Regulations) ..... 18. _____

Causing or allowing the operation of a sanitary landfill so as to cause or threaten or allow the discharge of any contaminants so as to cause water pollution in Illinois
(Section 12(a) of the Act and Section 807.313 of the Regulations) ..... 19. _____

Conducting a sanitary landfill operation in a manner which results in leachate flow entering Waters of the State (Section 21(o)(2) of the Act and Sections 807.313 and 807.314(e) of the Regulations) ..... 20.*_____

Conducting a sanitary landfill operation in a manner which results in leachate flows exiting the landfill confines (Section 21(o)(3) of the Act and Sections 807.313 and 807.314(e) of the Regulations) ..... 21.*_____

Inadequate: shelter ( ); sanitary facilities ( ); emergency communications ( ) for employees (Section 807.314(a) of the Regulations) ..... 22. _____

Inadequate roads within the site (Section 807.314(b) of the Regulations) .. 23. _____

Inadequate control of access to site (Section 807.314(c) of the Regulations) ..... 24. _____

Inadequate measures for fire protection (Section 807.314(d) of the Regulations) ..... 25. _____

Inadequate measures to monitor and control leachate (Section 807.314(e) of the Regulations) ..... 26. _____

Inadequate measures to control: dust ( ); vectors ( ) (Section 807.314(f) of the Regulations) ..... 27. _____

Failure to have an operational safety program approved by the Agency (Section 807.314(g) of the Regulations) ..... 28. _____

Inadequate provision for concealing sanitary landfill operations from public view (Section 807.314(h) of the Regulations) ..... 29. _____

Causing or allowing development or operation of a sanitary landfill without having proven to the Agency's satisfication that no damage or hazard will result to Waters of the State (Section 807.315 of the Regulations) ... 30. _____

Failure to monitor: gas ( ); water ( ); settling ( ) after the site is completed or closed (Section 807.318(a) of the Regulations) ..... 31. _____

Failure to take necessary remedial action to abate any gas ( ); water ( ); settling ( ) problems after the site is completed or closed (Section 807.318(b) of the Regulations) ..... 32. _____

Failure to properly file a detailed description of the site upon completion or closure of the site (Section 807.318(c) of the Regulations) ..... 33. _____

Refuse in standing or flowing water (Section 21(o)(1) of the Act) ..... 34.*_____

Deposition of refuse in any unpermitted portion of the landfill (Section 21(o)(9) of the Act) ..... 35.*_____

Acceptance of special waste without a required manifest (Section 21(o)(10) of the Act) ..... 36.*_____

Failure to submit reports required by permits or Board Regulations (Section 21(o)(11) of the Act) ..... 37.*_____

Acceptance of special waste for disposal, storage or treatment from a waste hauler that does not have a valid special waste hauling permit (Section 809.302(a) of the Regulations) ..... 38. _____

Acceptance of special waste for disposal, storage or treatment from a waste hauler that did not present a signed manifest which designated the receiver's facility as a destination for the special waste (Section 809.302(a) of the Regulations) ..... 39. _____

Failure to have financial assurance documents (Section 807.601 of the Regulations) ..... 40. _____

Failure to file: a closure plan ( ); post-closure plan ( ) (Sections 807.503 and 807.523 of the Regulations) ..... 41. _____

Failure to properly carry-out: closure plan ( ); post-closure plan ( ) (Sections 807.506 and 807.524 of the Regulations) ..... 42. _____

Apparent violation of: PCB ( ); Circuit Court ( ) Case Number_____, Order entered on _____, 19 ___ ..... 43. _____

Other ..... 44. _____

INFORMATIONAL NOTES

1. References to "Act" herein refer to the Illinois Environmental Protection Act: Ill. Rev. Stat. ch. 111 1/2, par. 1001, et seq.

2. References to "Regulations" herein refer to the rules and regulations of the Illinois Pollution Control Board: 35 Ill. Adm. Code, Subtitle G.

3. Statutory and regulatory references herein are provided for convenience only and should not be construed as legal conclusion of the Agency or as limiting the Agency's statutory or regulatory powers.

STATE OF ILLINOIS
ENVIRONMENTAL PROTECTION AGENCY

NARRATIVE EVALUATION DOCUMENT

Date of Review: SEPT. 25, 1992 Reviewer: KEN MENSING

Site Code: 1631210008 County: ST. CLAIR

Site Name: SAUGET / CERRO COPPER Time: 10:30-11:45 A.M

GENERAL REMARKS

THIS INSPECTION WAS CONDUCTED FOR THE PURPOSE OF DETERMINING THE OPERATIONAL STATUS OF THE LANDFILL SITE. CERRO COPPER HAD FILED A RA 15 FOR-1 INDICATING THAT IT WOULD BE INITIATING CLOSURE BY SEPT. 14, 1992. THIS LANDFILL SITE IS AN ON-SITE PERMIT EXEMPT INERT WASTE FACILITY. CERRO DISCONTINUED ITS USE ON MARCH 1, 1991. NO FURTHER WASTE IS BEING DISPOSED OF. THE SURFACE OF THE FILLED AREA HAS BEEN ROCKED AND SERVES AS A TRAILER PARKING AND MATERIAL STORAGE AREA. INITIAL FILLING COMMENCED DURING 1955. THE AREA COMPRISES ≈ 17 ACRES. THE SITE IS FENCED TO PRECLUDE ANY UNAUTHORIZED ACTIVITY. ON SEPT. 22, 92 CERRO SUBMITTED AN INITIAL FACILITY REPORT FOR ON-SITE FACILITIES ALONG WITH A SUMMARY OF CERRO'S ON-SITE INERT LANDFILL FACILITY.

STATE OF ILLINOIS
ENVIRONMENTAL PROTECTION AGENCY

SITE SKETCH

Date of Inspection: SEPT. 25, 1992 Inspector: KEN MENSING

Site Code: 1631210008 County: ST. CLAIR

Site Name: SAUGET / CERRO COPPER Time: 10:30-11:45 A.M.

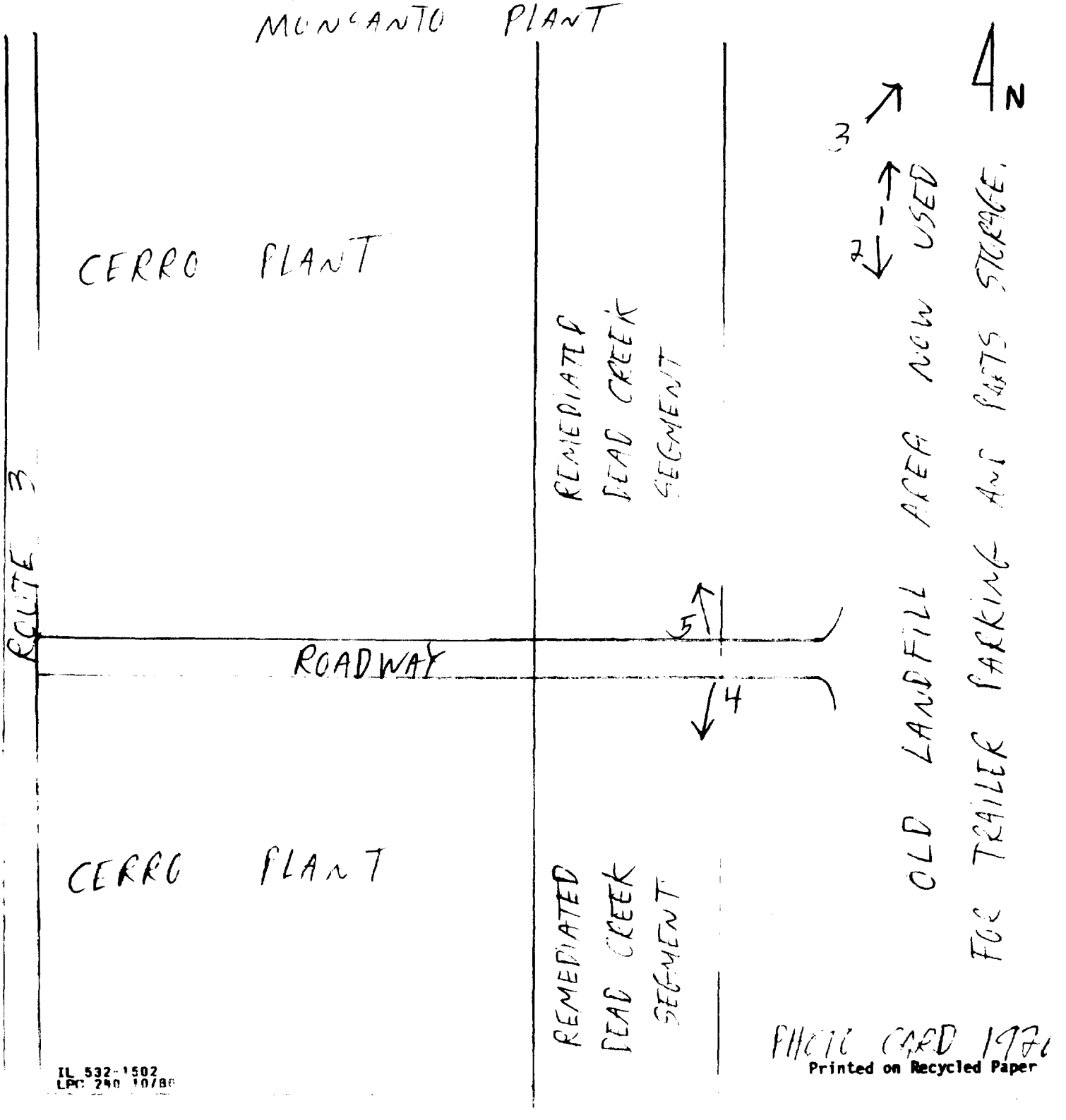


PHOTO CARD 1976

CERRO COPPER PRODUCTS CO.
P.O. Box 66800
St. Louis, MO 63166-6800
618/337-6000

September 22, 1992

Illinois Environmental Protection Agency
Bureau of Land
Environmental Information Support Unit
P.O. Box 19276
Springfield, Illinois 67294-9276

Re: Initial Facility Report - On-Site Inert Landfill
Cerro Copper Products Co.
Sauget, Illinois
I.D. # 1631210008 - St. Clair County

Dear Madam or Sir:

This letter is written in response to your September 16, 1992 letter and phone conversations on September 17 & 18, 1992 with Mr. D. Van Nattan concerning Cerro's old On-site Landfill. Cerro discontinued use of its permit exempt inert landfill prior to March 1, 1991. We understood from Mr. Van Nattan that Cerro is only required to submit an Initial Facility Report to conclude its obligation under the applicable regulations.

Attached are the Initial Facility Report and a general summary of the history of the site, and its current status.

We request that the Agency provide a written notice confirming that closure is complete. If you should have any questions or there are any other requirements with which Cerro must comply, please do not hesitate to phone or write this office.

Very truly yours,

CERRO COPPER PRODUCTS CO

Joseph M. Grana
Manager of Environmental
and Energy Affairs

State of Illinois
ENVIRONMENTAL PROTECTION AGENCY

Mary A. Gade, Director

2200 Churchill Road, Springfield, IL 62794-9276

INITIAL FACILITY REPORT - FOR ON-SITE FACILITIES

35 Illinois Administrative Code Section 815

1631210008
CERRO COPPER PRODUCTS CO.
ILLINOIS RT. 3 @ A&S RAILROAD TRACKS
SAUGET, ILL. 62201

All landfills exempt from permits pursuant to Section 21(d) of the Environmental Protection Act and which received waste after September 18, 1990 are required to submit an Initial Facility Report to the Illinois Environmental Protection Agency. It must be filed with the IEPA by September 18, 1992. New facilities must submit this report before any waste is accepted.

The below information is required by 35 IAC Section 815 to be submitted to IEPA. If you are initiating closure prior to September 18, 1992, the information required to be submitted need only demonstrate compliance with 35 Ill. Adm. Code Section 814.502. If you have any questions, please contact the Permit Section's, Solid Waste Unit at 217/524-3300.

A. WASTE VOLUME SUMMARY

1. Total amount of solid waste disposed on-site to date: unknown (in place cubic yards)
   If there is more than one type of waste, please attach a summary of waste types and their amounts. (See attached description)

2. Current yearly rate of disposal: 0 (none) (in place cubic yards)

3. Remaining capacity in existing units at the facility: 0 (none) (in place cubic yards)

B. PROPOSED ACTIVITIES

1. Expected amount of waste to be disposed on-site October 1, 1992 thru September 30, 1993: 0 (none) (in place cubic yards)

C. OTHER INFORMATION TO BE SUBMITTED N/A - Per Doug Van Nattan on 9/18/92

Please attach the following required information. Please indicate attachment number/letter in the blank provided.

attachment

1. _____ Certification by Professional Engineer - (Section 812.102)

SUMMARY OF CERRO'S ON-SITE INERT LANDFILL FACILITY

Between 1955 and 1969 Cerro purchased several parcels of land totaling approximately 17 acres, located to the east of its property. This land was used by Cerro from that time until March 1, 1991 as a landfill for inert material, generally concrete, metallics, brick, construction and demolition debris. Cerro also uses the land for the storage of its copper tube products in trailers, parking of empty trailers, storage of salvageable and usable old equipment, reclamation storage area for refractory brick prior to being reclaimed and waste dumpster storage. It is estimated that during the 37 years Cerro has owned at least a portion of the land, Cerro has placed between 1 to 8 feet of cover over the 17 acres depending on the slope of the land. This is approximately 27,500 yds to 220,000 yds of inert material which may have been landfilled during the 37 years.

Prior to Cerro's purchase of the land, the southern most portion of the land was used by the previous owner as a gravel pit/landfill area. This fact is documented in an Ecology & Environment, Inc report prepared for the Illinois Environmental Protection Agency, Division of Land Pollution Control dated May 1988. The report is titled "Expanded Site Investigation Dead Creek Project Sites at Cahokia/Sauget, Illinois Final Report." The area in question is noted as Site I of Area 1 in the report. Cerro does not have any way of determining the amount of material or the type of material the previous owners landfilled.

The current condition of the area is as follows:

1. Cerro discontinued the use of this area for inert material landfilling prior to March 1, 1991. We also do not plan to use this area in the future for disposal but only for storage as indicated above. Cerro has notified all relevant plant personnel that the area is to be used for storage only.

2. The area is fenced and the gates are controlled by Cerro's security force. There is no public access to the area. Additionally Cerro maintains perimeter cameras and continuous perimeter patrols by its full time Security Department.

3. The majority of the surface is tightly packed crushed stone. However, there are some small portions of the surface that have fill dirt and debris as its surface with some vegetation growth.

4. Surface drainage is either toward public roadways or toward a rainwater control ditch. Both drainages ultimately drain to the Village of Sauget Wastewater treatment system since the system is a combined sewer system.

CERRO COPPER PRODUCTS CO.
P.O. Box 66800
St. Louis, MO 63166-6800
618/337-6000

September 22, 1992

Illinois Environmental Protection Agency
Bureau of Land
Environmental Information Support Unit
P.O. Box 19276
Springfield, Illinois 67294-9276

Re: Initial Facility Report - On-Site Inert Landfill
Cerro Copper Products Co.
Sauget, Illinois
I.D. # 1631210008 - St. Clair County

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Attached are the Initial Facility Report and a general summary of the history of the site, and its current status.

We request that the Agency provide a written notice confirming that closure is complete. If you should have any questions or there are any other requirements with which Cerro must comply, please do not hesitate to phone or write this office.

Very truly yours,

CERRO COPPER PRODUCTS CO

Joseph M. Grana
Manager of Environmental
and Energy Affairs

bcc: P. Tandler (2)
R. E. Conreaux
J. D. Burroughs
[redacted]
M. L. Rodburg

State of Illinois
ENVIRONMENTAL PROTECTION AGENCY

Mary A. Gade, Director

2200 Churchill Road, Springfield, IL 62794-9276

INITIAL FACILITY REPORT - FOR ON-SITE FACILITIES

35 Illinois Administrative Code Section 815

1631210008
CERRO COPPER PRODUCTS CO.
ILLINOIS RT. 3 @ A&S RAILROAD TRACKS
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Illinois Environmental Protection Agency · P. O. Box 19276, Springfield, IL 62794-9276

217/524-3300

Airborne Express No. 7000778116

September 16, 1992

Cerro Copper Products Co.
Highway 3 & Mississippi Avenue
Sauget, Illinois 62201

Re: 1631210008 -- St. Clair County
Cerro Copper Products Co.
Facilities Required to Initiate Landfill Closure In Accordance with
35 Ill. Adm. Code Part 814, Subpart E
State Permit File

Dear Owner/Operator:

Your facility must cease accepting waste by the close of business on September 18, 1992.

According to our records, you notified the Agency that your facility is subject to the requirements of 35 Ill. Adm. Code 814, Subpart E and your facility is scheduled to begin closure September 18, 1992. Any acceptance of waste after the close of business on September 18, 1992 is a violation of 35 Ill. Adm. Code 814.501(b) and 807.509 and may subject you to an enforcement action under the Illinois Environmental Protection Act ("Act"). The Act provides for civil penalties up to $50,000 for each violation and up to $10,000 for each day the violation continues, plus other relief as provided by law.

If you have any questions regarding the above, please contact the Bureau of Land's Permit Section Solid Waste Unit at the above phone number. In addition, if you believe that the Agency's records are in error, please notify us immediately in writing.

Respectfully,

William C. Child, Chief
Bureau of Land

WCC:JM:sf/435Z,61

cc: Delegated County

CERRO COPPER PRODUCTS CO.
P.O. Box 66800
St. Louis, MO 63166-6800
618/337-6000

September 3, 1991

Mr. Patrick M. McCarthy
Manager, Training & Certification Unit
Illinois Environmental Protection Agency
Division of Land Pollution Control
2009 Mall Street
Collinsville, IL 62234

RE: Notice of Application for Landfill Operator
Cerro Copper Products Co.
Sauget, IL

Dear Mr. McCarthy:

Per our conversation of August 30, 1991 concerning the subject notification, I am enclosing copies of the two notifications we have submitted to your Springfield office, dated January 27, 1989 and March 18, 1991. Note that Cerro no longer disposes of inert material generated on-site. Cerro uses the property for parking and brick storage.

If you should have any questions, feel free to phone my office.

Very truly yours,

CERRO COPPER PRODUCTS CO.

Joseph M. Grana
Manager of Environmental and Energy Affairs

JMG/ge

Attachments

bcc: P. Tandler (w/o attachments)
J. D. Burroughs " "
File

CERRO COPPER PRODUCTS CO.
P.O. Box 66800
St. Louis, MO 63166-6800
618/337-6000

March 18, 1991

Mr. Ed Bakowski
Illinois Environmental Protection Agency
Division of Land Pollution Control #24
Planning and Reporting Section - Compliance Unit
P. O. Box 19276
Springfield, IL 62794-9276

RE: Notification of Existing Landfill
Cerro Copper Products Co.
Sauget, IL

Dear Mr. Bakowski:

In compliance with 35 IAC 814.103, enclosed is an original and two copies of Notification for an Existing Landfill (Form IL532-1943) with attached drawings as required.

Cerro has used a portion of its property for the disposal of inert materials generated on-site, thus this landfill is exempt from permitting requirements pursuant to §21(d) of the Illinois Environmental Protection Act. For your information, the Illinois Environmental Protection Agency has designated this property as part of the Sauget Sites Superfund L1631210008 - St. Clair County, known as Site I of Area 1. Cerro has discontinued disposal activity at this landfill; it will be covered with gravel and used as a parking lot.

We request that the Agency provide Cerro a written notice that closure is complete, and that all necessary information and documentation has been provided pursuant to the Illinois Environmental Protection Act and accompanying regulations. If you should have any questions, please do not hesitate to phone this office.

Very truly yours,

CERRO COPPER PRODUCTS CO.

Joseph M. Grana
Manager of Environmental
and Energy Affairs

JMG/ge

Enclosures

bcc: P. Tandler (w/o drawings)
R. E. Conreaux "
J. D. Burroughs "
File

Fern Fleischer Daves, (Lowenstein,etal)

Illinois Environmental Protection Agency · P.O. Box 19276, Springfield, IL 62794-9276

Notice Form For Existing Landfills Required to Notify by March 18, 1991
LPC-PA15 - FINAL

This form must be completed and returned to the IEPA, Division of Land Pollution Control to comply with the requirements of 35 IAC 814.103. This requirement applies to all Non Hazardous landfills (Note: landfills includes waste piles, but not impoundments), both permitted and not permitted, which were not closed by September 18, 1990. It establishes the minimum information necessary for the Agency to classify your facility and establish the applicability of 35 IAC Parts 811-815 of the Landfill regulations which became effective on September 18, 1990. FORMS MUST BE SUBMITTED NO LATER THAN MARCH 18, 1991.

Complete this form for the applicable facility or unit. Attach any additional information or plans as needed. Please contact the Solid Waste Unit, Permit Section at 217/782-6762 if you have any questions regarding completing this form.

Information in this document will be used in conjunction with reviews of future applications and reports. Therefore, you may be required to explain or document this information at sometime in the future which could be years from now. The filing of this form is in no way to be considered approval of the information contained therein by the Agency.

SITE IDENTIFICATION

Name: CERRO COPPER PRODUCTS CO. Site # (IEPA): 1631210008

Address: Illinois Rt. 3 @ A&S R. R. Tracks

City: Sauget, IL County: St. Clair

If applicable, Original Development Permit N/A

Permit No.: _____ Date: _____

List all other Development Permits for any expansions.

_____

_____

_____

I. A. Landfills required to have a permit as of September 18, 1990. Use Part B if exempt under Section 21(d) of the Act. (N/A)

1)	Total number of acres permitted for development	_____ Acres
2)	Number of acres filled which have final cover and vegetation in place on September 18, 1990	_____ Acres
3)	Active area where waste has been placed and cover has not been completed	_____ Acres
4)	Permitted capacity remaining (in place yds.)	_____ cubic yards
5)	Estimated annual volume of waste received ___ gate yds.	_____ cubic yards (in place)
6)	Have any areas been filled beyond the currently permitted boundaries (include vertical or final contour boundaries as well as lateral boundaries)	___ Yes ___ No

Attach a drawing (or drawings) showing the areas identified above in Nos. 1-4, and existing contours. Show permitted boundaries. Identify all units and types of waste received in each unit (i.e., inert, chemical, putrescible, etc.).

B. For landfills not required to be permitted (Exempted under Section 21(d) of the Act; on site)

1)	Number of acres filled which have final cover and vegetation in place on ~~September xx, 1990~~ March 1, 1991	17 Acres
2)	Number of acres filled without final cover	0 Acres
3)	Active area where waste has been placed and final cover has not been completed	0 Acres
4)	Capacity remaining (in-place yds.)	0 cubic yards
5)	Estimated volume of waste disposed of annually	0 cubic yards (in place yds.)

Attach a drawing (or drawings) showing the areas identified above in Nos. 1-3. Show ~~permitted~~ boundaries. Identify all units and types of waste received in each unit (i.e., inert, chemical, putrescible, etc.). Drawing attached.

This Agency is authorized to require this information under Illinois Revised Statutes, 1979, Chapter 111 1/2, Section 1039. Disclosure of this information is required under that Section. Failure to do so may prevent this form from being processed and could result in your application being denied. This form has been approved by the Forms Management Center.

II. Provide the anticipated date the landfill will initiate closure. Month March 1 Year 1991. Also, discuss how this information was derived. Including remaining capacity in cubic yards, rate of waste receipt, schedule for closure activities and revised final contours, if closing prematurely.

Cerro no longer will use landfill. Area will be regraded in the future with stone for truck parking.

III. For Permitted Sites

Based on the above check the appropriate subpart which applies to the facility and demonstrate how compliance will be achieved.

[X] Subpart E - Initiate Closure by September 18, 1992.

[ ] Subpart D - Initiate Closure by September 18, 1997.

[ ] Subpart C - Remain open beyond September 18, 1997.

[ ] Subpart B - Inert Waste Only (for inert waste, documentation in accordance with 35 IAC 811.202 must be included)

Provide the estimated filing date of the significant modification submittal required by 35 IAC 814.104 for Subpart B, C, or D facilities _____ Month _____; Year _____. Provide the name and phone of a contact person should any clarification be required.

35 IAC 814.104(c) allows up to 48 months for the modification to be filed. Under 35 IAC 813.201(b) the Agency may require submission at an earlier date.

IV. For Landfills Not Required to Have a Permit.

Provide the estimated filing date of the Initial Facility Report required by 35 IAC 815 Subpart B. Month: January Year: 1989
Contact Person: J. M. Grana Phone No.: 618/337-6000

Mail an original and 2 copies to: Illinois Environmental Protection Agency
Division of Land Pollution Control #24
Planning and Reporting Section -- Compliance Unit
Post Office Box 19276
Springfield, Illinois 62794-9276

I certify under penalty of law that the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowingly making false material statements or representations.

3-12-91

Signature: _____
(Operator/Authorized Agent)

Name/Title: Paul Tandler, Vice President

EB:ct,340q,72-73

bce PT.
JDB

ON-SITE INDUSTRIAL WASTE HANDLING REPORT FORM

Please return this form to:

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
SOLID WASTE MANAGEMENT SECTION
P.O. BOX 19276
2200 CHURCHILL ROAD
SPRINGFIELD, ILLINOIS 62794-9276
(217) 782-6760

SEE BACK SIDE FOR DIRECTIONS IN COMPLETING THIS FORM

If not known, please leave blank.
IEPA Identification Number 1631210008

1. Owner and Location Information

Facility Name CERRO COPPER PRODUCTS COMPANY
Owner Name SAME
Street Address HWY 3 and A & S RR TRACKS - SAUGET, ILLINOIS
Location of Facility if no Street Address

County ST. CLAIR
Company Telephone Number (618) 337-6000
Contact Person and Phone Number JOE D. BURROUGHS (618)337-6000
Principal Industrial Activity COPPER TUBING PRODUCTION

2. Waste Handling Information

Type of Operation	Waste Type	Annual Amount	Capacity Remaining	
			Amount	Years
MAINTENANCE	*	120 CU.YD.	27,000CU.YD.	225
* BROKEN CONCRETE, BRICK, AND DEMOLITION DEBRIS				

3. Certification

Name and official title of owner, operator or authorized agent (type or print clearly)

S. A. SILVERSTEIN, MANAGER OF ENERGY AND ENVIRONMENTAL AFFAIRS

Signature S A Silverstein Date Signed Jan 27, 1989

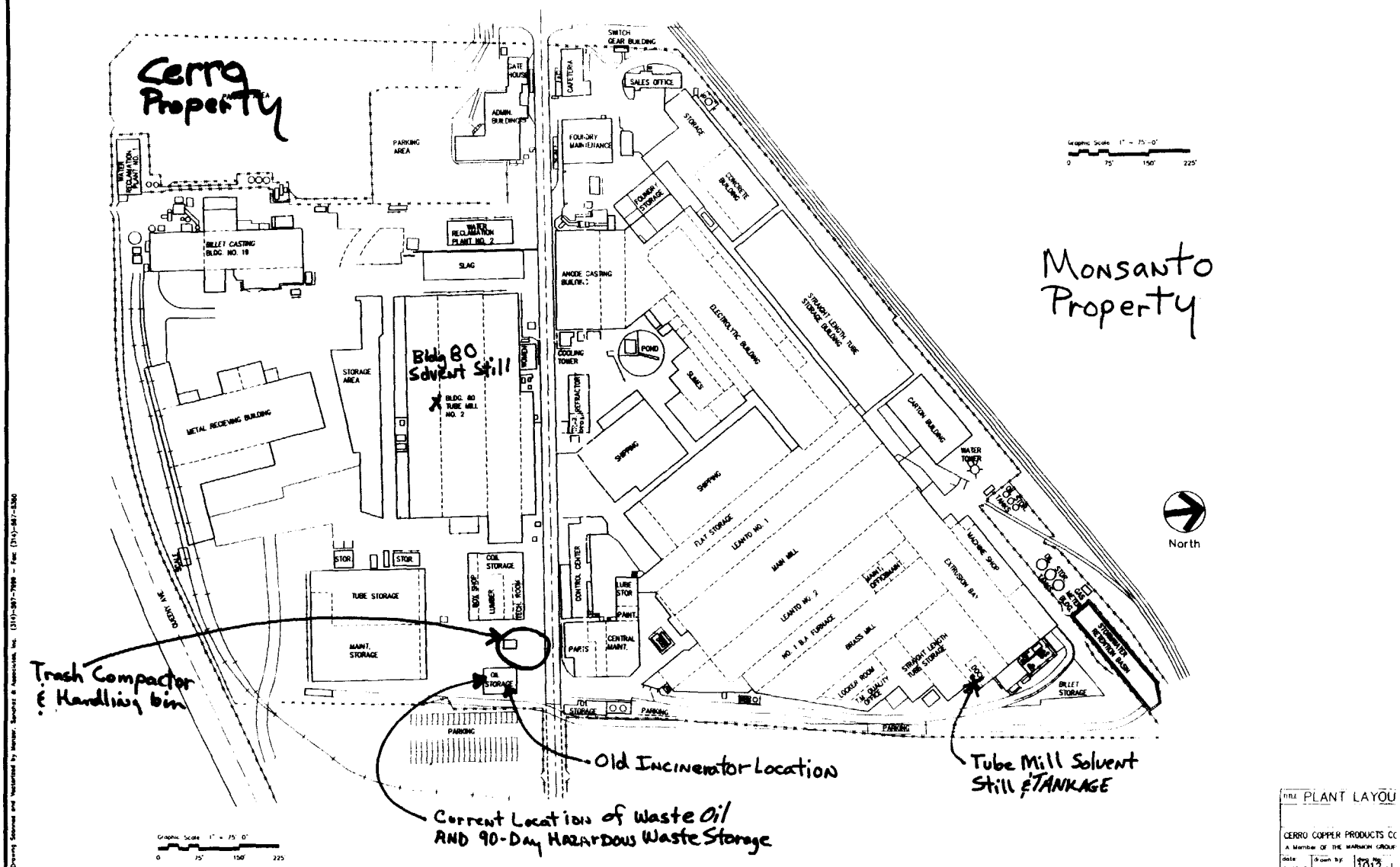
This agency is authorized to require this information under Illinois Revised Statutes, 1979, Chapter 111 1/2, Section 1021.22. Disclosure of this information is required under that Section. Failure to do so may prevent this form from being processed. This form has been approved by the Forms Management Center.

IL 532-1738
LPC 295 11/88

Exhibit D

ANSWER 35 Exhibit

SOLID WASTE LOCATIONS
Excluding Fill Locations



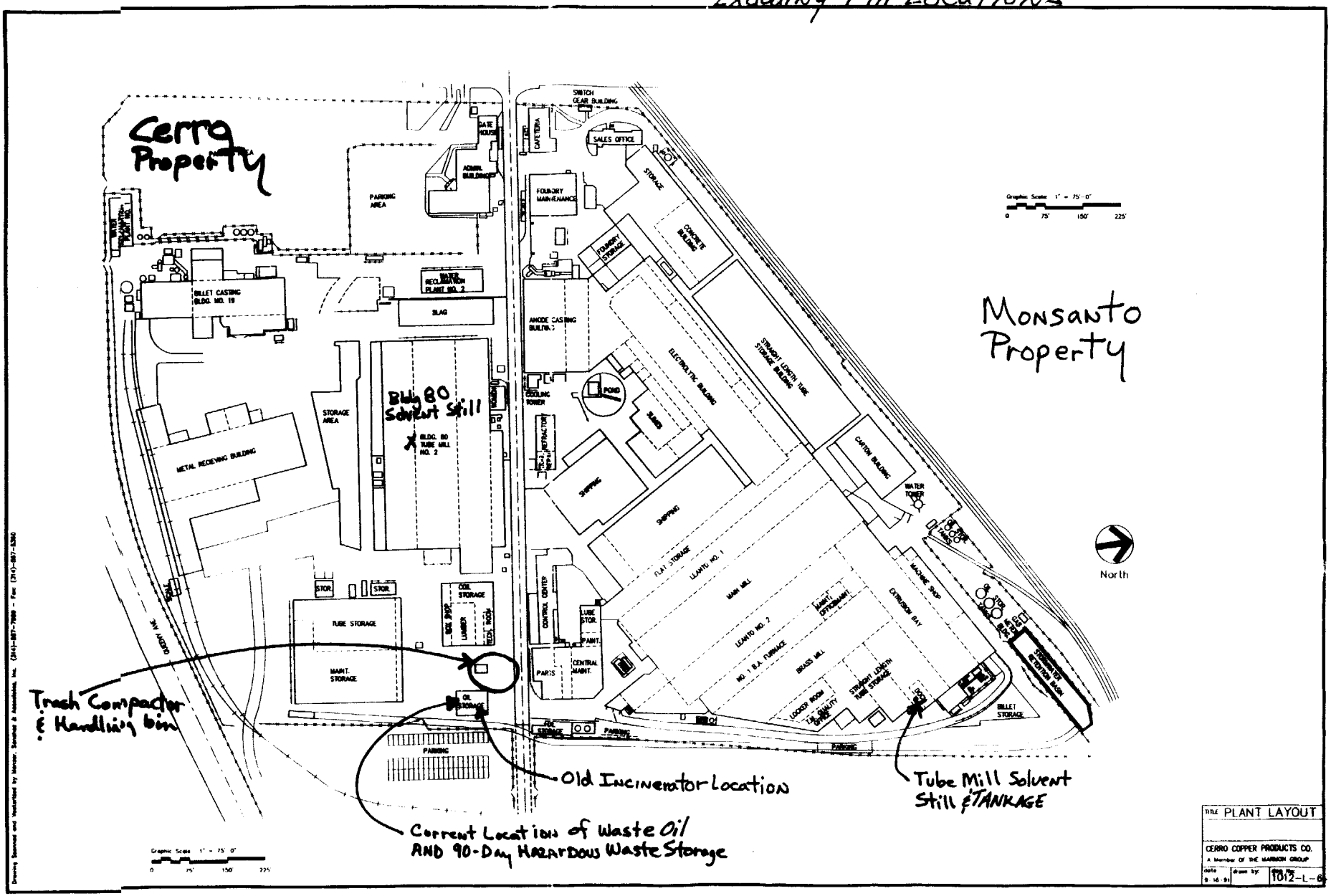
Graphic Scale 1" = 75'-0"
0 75' 150' 225'

Drawing Scanned and Vectorized by Hansen, Sanchez & Associates, Inc. (314)-567-7999 – Fax (314)-567-8360

TITLE PLANT LAYOU
CERRO COPPER PRODUCTS CO
A Member of THE MARMON GROUP
date 9-16-91 drawn by dwg. No. 1012-L

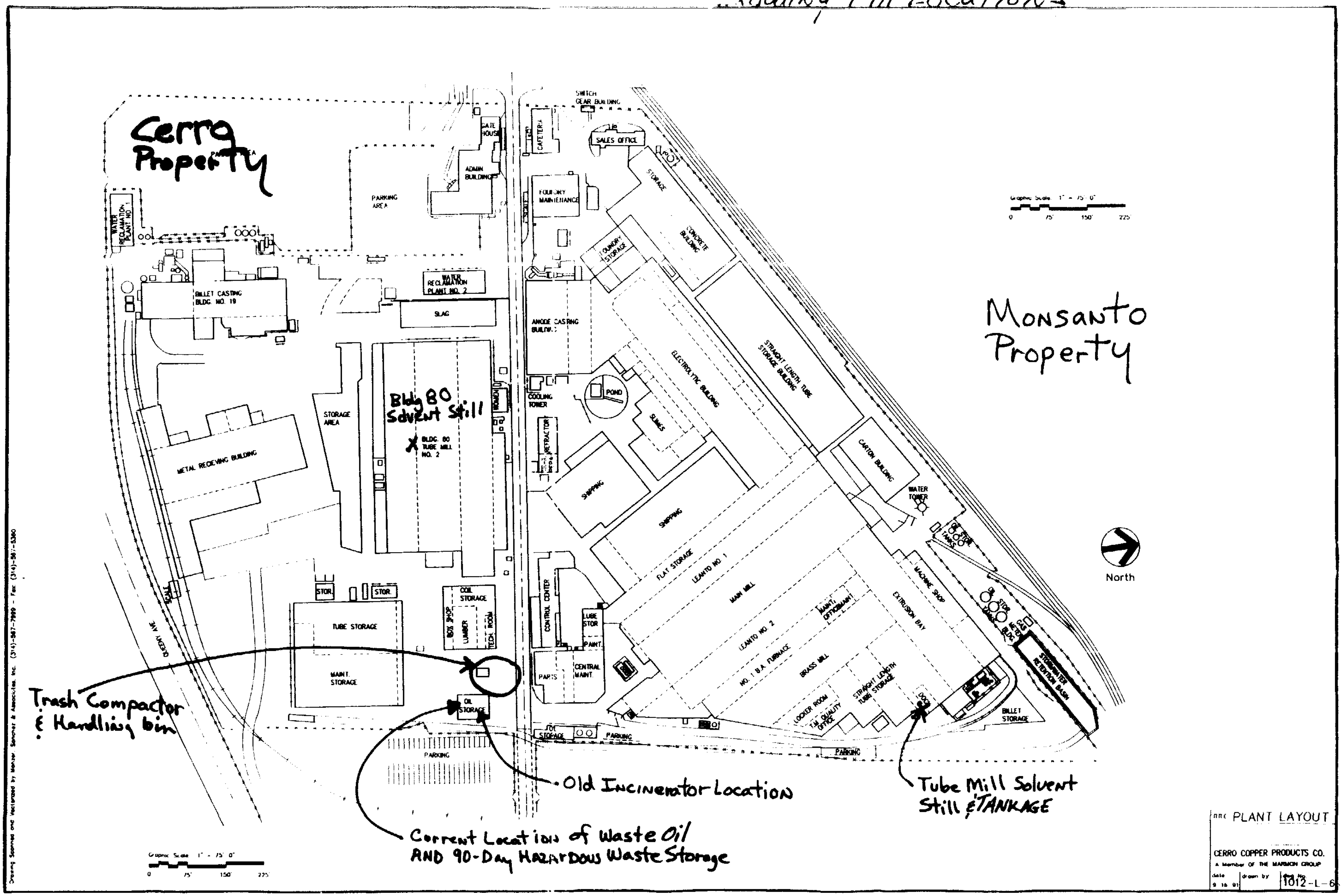
ANSWER 3 [illegible]

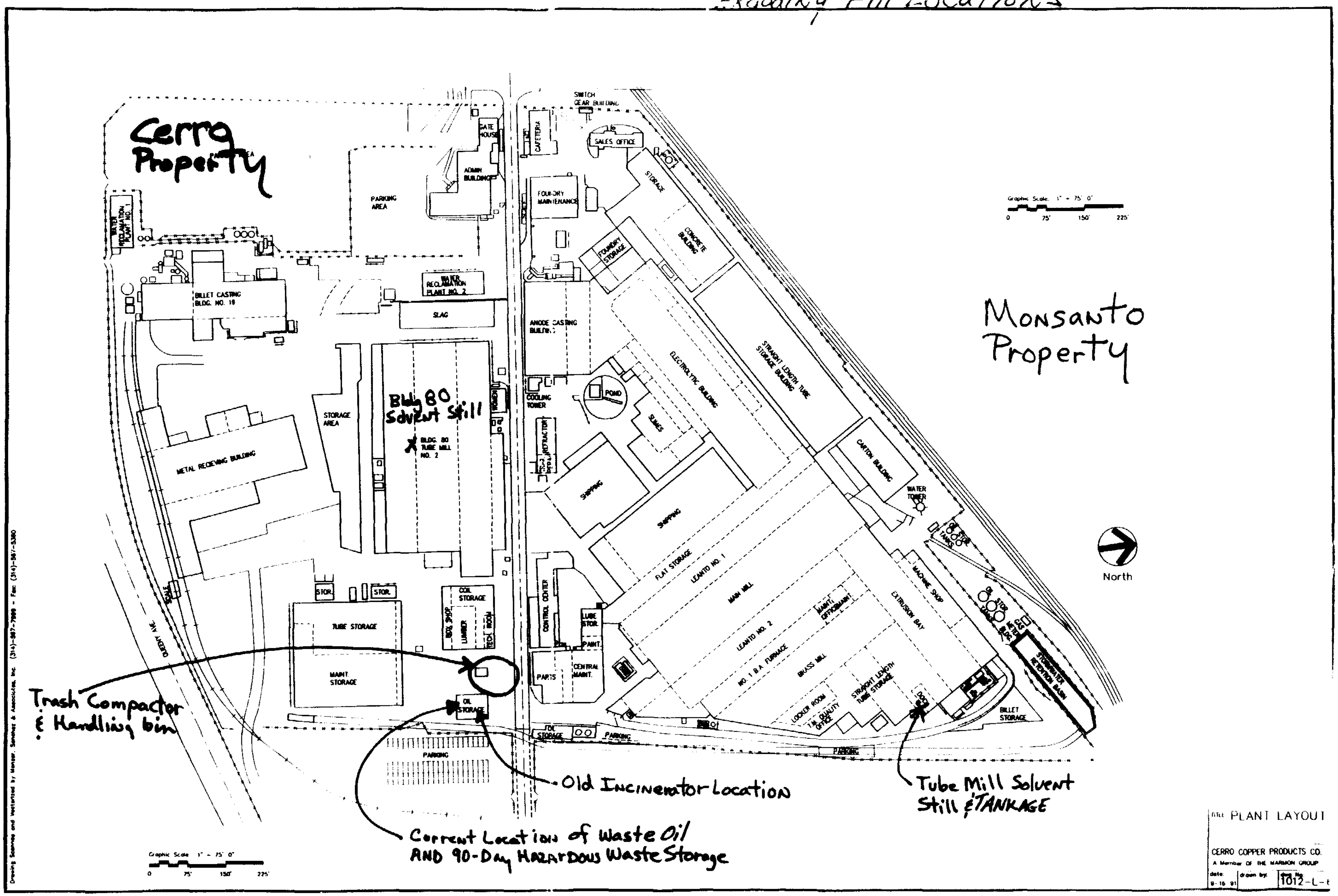
Excluding Fill Locations



Answer ...

Existing Fill Locations


Cerro Property
Monsanto Property
Bldg 80 Solvent Still
Trash Compactor & Handling bin
Old Incinerator Location
Current Location of Waste Oil AND 90-Day Hazardous Waste Storage
Tube Mill Solvent Still & TANKAGE
SWITCH GEAR BUILDING
GATE HOUSE
ADMIN BUILDING
PARKING AREA
CAFETERIA
SALES OFFICE
STORAGE
FOUNDRY MAINTENANCE
FOUNDRY STORAGE
CONCRETE BUILDING
WATER RECLAMATION PLANT NO. 1
WATER RECLAMATION PLANT NO. 2
BILLET CASTING BLDG. NO. 19
SLAG
ANODE CASTING BUILDING
STRAIGHT LENGTH TUBE STORAGE BUILDING
ELECTROLYTIC BUILDING
POND
COOLING TOWER
SLIMES
STORAGE AREA
BLDG. 80 TUBE MILL NO. 2
METAL RECEIVING BUILDING
REFRACTOR
SHIPPING
CARTON BUILDING
WATER TOWER
FLAT STORAGE
LEANTO NO. 1
MAIN MILL
LEANTO NO. 2
MACHINE SHOP
EXTRUSION BAY
MAINT. OFFICE
NO. 1 B.A. FURNACE
BRASS MILL
LOCKER ROOM
STRAIGHT LENGTH TUBE STORAGE
DOCK
T.M. QUALITY OFFICE
BILLET STORAGE
STORMWATER RETENTION BASIN
STOR.
COIL STORAGE
BOX SHOP
LUMBER
TECH ROOM
TUBE STORAGE
MAINT. STORAGE
OIL STORAGE
CONTROL CENTER
LUBE STOR
PAINT
PARTS
CENTRAL MAINT.
PARKING
QUEENY AVE
SCALE
North
Graphic Scale 1" = 75' 0"
0 75' 150' 225'
PLANT LAYOUT
CERRO COPPER PRODUCTS CO.
A Member OF THE MARMON GROUP
9 16 91
1012-L-6


Cerro Property
Monsanto Property
Bldg 80 Solvent Still
Trash Compactor & Handling bin
Old Incinerator Location
Current Location of Waste Oil AND 90-Day Hazardous Waste Storage
Tube Mill Solvent Still & TANKAGE
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BILLET CASTING BLDG. NO. 19
PARKING AREA
GATE HOUSE
ADMIN BUILDING
WATER RECLAMATION PLANT NO. 2
SLAG
STORAGE AREA
BLDG. 80 TUBE MILL NO. 2
METAL RECIEVING BUILDING
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TUBE STORAGE
MAINT. STORAGE
COIL STORAGE
TOOL SHOP
LUMBER
TECH ROOM
OIL STORAGE
PARKING
CAFETERIA
SWITCH GEAR BUILDING
SALES OFFICE
FOUNDRY MAINTENANCE
FOUNDRY STORAGE
STORAGE
CONCRETE BUILDING
ANODE CASTING BUILDING
COOLING TOWER
POND
REFRACTORY
ELECTROLYTIC BUILDING
SLIMES
STRAIGHT LENGTH TUBE STORAGE BUILDING
SHIPPING
CARTON BUILDING
WATER TOWER
FLAT STORAGE
LEANTO NO. 1
MAIN MILL
LEANTO NO. 2
NO. 1 B.A. FURNACE
BRASS MILL
EXTRUSION BAY
MACHINE SHOP
LOCKER ROOM
STRAIGHT LENGTH TUBE STORAGE
CONTROL CENTER
LUBE STOR.
PAINT
PARTS
CENTRAL MAINT.
BILLET STORAGE
STORMWATER RETENTION BASIN
North
Graphic Scale 1" = 75' 0"
0 75' 150' 225'
PLANT LAYOUT
CERRO COPPER PRODUCTS CO.
A Member of THE MARMON GROUP
date: 8-16-91
1012-L-1

ANSWER 35 Exhibit

SOLID WASTE LOCATIONS
Excluding Fill Locations

EXD

Cerro Property

Monsanto Property

Graphic Scale: 1" = 75'-0"
0 75' 150' 225'

North

Bldg 80 Solvent Still

Trash Compactor & Handling bin

Old Incinerator Location

Current Location of Waste Oil AND 90-Day HAZARDOUS Waste Storage

Tube Mill Solvent Still & TANKAGE

PARKING AREA
WATER RECLAMATION PLANT NO. 1
BILLET CASTING BLDG. NO. 19
WATER RECLAMATION PLANT NO. 2
SLAG
STORAGE AREA
METAL RECEIVING BUILDING
GATE HOUSE
ADMIN. BUILDING
SWITCH GEAR BUILDING
CAFETERIA
SALES OFFICE
FOUNDRY MAINTENANCE
FOUNDRY STORAGE
STORAGE
CONCRETE BUILDING
ANODE CASTING BUILDING
ELECTROLYTIC BUILDING
STRAIGHT LENGTH TUBE STORAGE BUILDING
POND
SLIMES
COOLING TOWER
WOMEN
REFRACTORY
SHIPPING
CARTON BUILDING
WATER TOWER
OIL STOR. TANKS
FLAT STORAGE
LEANTO NO. 1
MAIN MILL
LEANTO NO. 2
NO. 1 B.A. FURNACE
MAINT. OFFICE/MAINT.
EXTRUSION BAY
MACHINE SHOP
BRASS MILL
LOCKER ROOM
T.M. QUALITY OFFICE
STRAIGHT LENGTH TUBE STORAGE
DOCK
BILLET STORAGE
GAS METER BLDG.
STORMWATER RETENTION BASIN
STOR.
TUBE STORAGE
MAINT. STORAGE
COIL STORAGE
BOX SHOP
LUMBER
TECH. ROOM
CONTROL CENTER
LUBE STOR.
PAINT.
PARTS
CENTRAL MAINT.
OIL STORAGE
PARKING
QUEENY AVE.
SCALE

TITLE PLANT LAYOUT
CERRO COPPER PRODUCTS CO.
A Member OF THE MARMON GROUP
date: 9-16-91 drawn by: dwg No: 1012-1-6

Drawing Scanned and Vectorized by Monser, Sanchez & Associates, Inc. (314)-567-7999 - Fax: (314)-567-5360

Exhibit E

Illinois Environmental Protection Agency

2200 Churchill Road, Springfield, Illinois 62706

217/782-2113

I.D. No.: 163121AAM
Application No.: 08060020
Operation of: Incinerator
Letter Dated: March 19, 1979

March 21, 1979

Cerro Copper Products Company
Post Office Box 681
East St. Louis, Illinois 62202

Attention: Mr. Paul Tandler

Gentlemen:

The Agency hereby acknowledges receipt of your letter which indicates that the equipment described by the above referenced permit is no longer in operation. Thank you for this information; we have changed our records accordingly.

If we can be of further assistance, please contact us.

Very truly yours,

Michael J. Hayes, P.E.
Manager, Permit Section
Division of Air Pollution Control

MJH:EWH:bn/7591a/7

3/23/79 cc. R. E. Conaghan
J. C. Johnson
File 1900-EPA/ Permit File

CERRO COPPER PRODUCTS CO.
A Member of The Marmon Group
P.O. Box 681
East St. Louis, Illinois 62202
618/337-6000

March 19, 1979

Illinois Environmental Protection Agency
2200 Churchill Road
Springfield, Illinois 62706

Attention: Mr. M. Paul Schmierbach, P.E.
Manager, Permit Section, Div. of Air Pollution Control

Re: Application No. 08060020
I.D. No. 163121 AAM

Dear Mr. Schmierbach:

On October 25, 1978 the Agency issued an extension of our permit to operate our Brule Incinerator until March 20, 1979 to allow the evaluation of Incineration vs. solid waste hauling before instituting extensive repairs on our Incinerator. Our letter of October 3, 1978 explained our position and resulted in the permit extension granted in your letter of the 25th.

We have not operated this Incinerator for the past six months and have satisfactorily concluded the economic study which pointed out that the continuation of contract hauling is to our advantage over Incineration.

Accordingly, it is our present intention to keep the Incinerator closed down and to continue the removal of our solid waste materials by others. We therefore request that our operating permit renewal application for the Incinerator be suspended for an indefinite period of time. Should circumstances require us to resume Incinerator operations at some future date, we will process a new application for both the modifications and the required operating permit.

Thank you for your continuing cooperation.

Yours truly,

CERRO COPPER PRODUCTS CO.
A Member of the Marmon Group of Companies

Paul Tandler
Vice President-Manufacturing

PT/bg

cc: Mr. Otis H. Banes
Regional Office, Collinsville, Illinois

bcc: R. E. Conreaux
J. C. Johnson
File 1900 EPA/Permit File

Illinois Environmental Protection Agency 2200 Churchill Road, Springfield, Illinois 62706

217/782-2113

Permit Expiration Date: March 20, 1979

Application No.: 08060020
I.D. No.: 163121AAM INCINERATE
Received: October 4, 1978
Operation of: Incinerator
Location: Mississippi Avenue at Alton & Southern Tracks, Sauget, St. Clair County

October 25, 1978

Cerro Copper Products Company
Mississippi Avenue at Alton & Southern Tracks
Sauget, Illinois 62202

Attention: Paul Tandler

Gentlemen:

Permit is hereby granted to operate the above-referenced equipment.

This permit is subject to the following conditions:

1. Standard conditions attached hereto and incorporated herein by reference.

2. The following special conditions:

   This permit is to be granted for a period of 90 days beyond the original December 20, 1978 expiration date in order that you may submit the results of your evaluation of the solid waste hauling study.

   A determination will then be made as to whether an operating permit can be issued based on your final decision regarding the use of landfill as an alternative to incineration.

Very truly yours,

M. Paul Schmierbach

M. Paul Schmierbach, P.E.
Manager, Permit Section
Division of Air Pollution Control

MPS:HMP:lg/5188a/11

cc R. E. Conroy
J. C. Johnson
Files - Permit F.
1900 - EPA

CERRO COPPER PRODUCTS CO.
A Member of The Marmon Group
P.O. Box 681
East St. Louis, Illinois 62202
618/337-6000

October 3, 1978

Illinois Environmental Protection Agency
2200 Churchill Road
Springfield, Illinois 62706

Attention: Mr. M. Paul Schmierbach, P.E.
Manager, Permit Section, Div. of Air Pollution Control

Re: Application No. 08060020
I.D. No. 163121 AAM

Dear Mr. Schmierbach:

On June 21, 1978 your office issued a permit to cover the operation of our plant refuse incinerator for a period ending December 20, 1978. A special condition required that a test of particulate matter and carbon monoxide concentrations in the effluent stream be conducted during this period.

Prior to obtaining this short-term permit our discussions with Mr. Anthony Telford indicated that we intended to perform extensive maintenance or replacement work to the gas-cleaning apparatus in this system and that the time needed to perform this work required a six-month temporary permit.

In evaluating our plant requirements for refuse disposal we could not ignore the alternative of hauling our solid waste to a disposal site and to compare the economics of that method with our own disposal system.

Accordingly, beginning in early September we have been disposing of our solid refuse through a contract hauler to a nearby landfill and incinerator operations have been temporarily suspended. A 60-90 day period will be required to evaluate the two methods, after which a further decision will be made on whether to continue the present method or to make a substantial investment in the gas-cleaning section of the Brule Incinerator.

We therefore request that the Agency and Cerro temporarily suspend the transaction towards an operating permit until we have concluded our studies and can make a cost-effective and environmentally suitable decision late in the year. We will, of course, contact your office at the appropriate time. Mr. Otis Banes of the Collinsville Regional Office is being kept informed of this matter.

Thank you for your cooperation.

Yours truly,

CERRO COPPER PRODUCTS CO.
A MEMBER OF THE MARMON GROUP

Paul Tandler, Vice President-Manufacturing

PT/bg

cc: Mr. Otis H. Banes
Regional Office, Springfield, Illinois

bcc: R. E. Conreaux
J. C. Johnson
File 1900 EPA - Permit

Illinois Environmental Protection Agency 2200 Churchill Road, Springfield, Illinois 62706

217/782-2113

Permit Expiration Date: December 20, 1978

Application No.: 08060020
I.D. No.: 163121AAM INCINERATOR
Received: June 13, 1978
Operation of: Incinerator
Location: Mississippi Avenue at A & S Tracks, Sauget, Illinois

June 21, 1978

Cerro Copper Products Co.
Mississippi Avenue at Alton & Southern Tracks
Sauget, Illinois 62202

Attention: Mr. Paul Tandler,
Vice President, Mfg.

Gentlemen:

Permit is hereby granted to operate the above-referenced equipment.

This permit is subject to the following conditions:

1. Standard conditions attached hereto and incorporated herein by reference.

2. The following special conditions:

   a. Within 90 days of receipt of this permit, the particulate matter and carbon monoxide concentrations in the effluent stream shall be measured by an approved independent testing service in accordance with the Agency's policy statement of November 2, 1972 "Policy Regarding Evaluation of Incinerators", using the procedures described in the "Incinerator Particulate Test Procedures" ATP-1 and ATP-1A and the "Measurement Method of Carbon Monoxide" ATP-2. The results of these tests, in triplicate, shall be forwarded to the Agency immediately after the test results are compiled and finalized. The Agency may witness these tests.

The Agency Regional office is to be notified, in writing, a minimum of thirty (30) days prior to the expected date of these tests and further notified a minimum of five (5) working days prior to the test of the exact date, time and place of these tests.

Very truly yours,

M. Paul Schmierbach

M. Paul Schmierbach, P.E.
Manager, Permit Section
Division of Air Pollution Control

MPS:AMT:er/3871A/28-29

STATE OF ILLINOIS
ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF AIR POLLUTION CONTROL
2200 CHURCHILL ROAD
SPRINGFIELD, ILLINOIS 62706

STANDARD CONDITIONS FOR OPERATING PERMITS

1. The issuance of an operating permit by the Agency does not release the permittee from compliance with other applicable statutes of the State of Illinois or with applicable local laws, regulations or ordinances.

2. The Agency has granted this permit based upon the information submitted by the permittee in his permit application. Any misinformation, false statement or misrepresentation in the permittee's application shall be grounds for revocation under Rule 103(f), Chapter 2, Part 1 of the Illinois Pollution Control Board Rules and Regulations.

3. The permittee shall not authorize, cause, direct or allow any modification, as defined in Rule 101, Chapter 2, Part 1, of the Illinois Pollution Control Board Rules and Regulations, of equipment, operations or practices which are reflected in the permit application as submitted unless a new application or request for revision of existing application is filed with the Agency at least ninety (90) days prior to the time of such modification and unless a new permit or revision of existing permit is granted for such modification.

4. At any time during normal working and/or operating hours, any agent of the Environmental Protection Agency shall have the right and authority to inspect such equipment and operation as described by the referenced operating permit application. Permittee agrees to allow such inspections. This authority:

   (a) shall not in any manner affect the title to the premises upon which the equipment is located.

   (b) does not release the permittee from any liability for any loss due to damage to person or property caused by, resulting from, or arising out of, the design, installation, maintenance, or operation of the proposed equipment.

   (c) in no manner implies or suggests that the Environmental Protection Agency (or its officers, agents or employees) assumes any liability, directly or indirectly, for any loss due to damage, installation, maintenance, or operation of the proposed equipment.

5. The equipment covered by this permit shall be operated in such a manner that the disposal of air contaminants collected by the equipment shall not cause a violation of the Environmental Protection Act or Regulations promulgated thereunder.

6. The permittee shall maintain the equipment in such a manner that the performance of such equipment shall not cause a violation of the Environmental Protection Act or Regulations promulgated thereunder.

7. The permittee shall maintain a maintenance record on the premises for each item of air pollution control equipment. This record shall be available to any agent of the Environmental Protection Agency at any time during normal working and/or operating hours. This record shall show, as a minimum, the following:

   (a) Date of performance of, and nature of, preventive maintenance.

   (b) Date of any malfunction or breakdown and the nature of repairs to, or corrective measures performed to maintain the performance of, the equipment.

8. The permittee shall submit annually, beginning one year from the date of this operating permit, an "Annual Emission Report," form APC-208, as required by Rule 107 of the PCB Regs., Chapter 2, Part 1.
   (NOTE: If the permittee has other operating permits for this facility, he may submit annually the "Annual Emission Report," form APC-208, for all such permits in one submission.)

9. If the permit application contains information which has been accepted as confidential by the Agency, the Agency will return a copy of the application to the permittee. The permittee shall maintain on the premises this copy of the application intact and without change. The permittee shall make available this copy of the application for the perusal of any agent of the Environmental Protection Agency at any time during normal working and/or operating hours.

10. If the referenced permit application contains a Compliance Program and Project Completion Schedule (APC-202), the permittee shall submit a Project Completion Report (APC-271) within thirty (30) days of any date specified in the Compliance Program and Project Completion Schedule, or at six month intervals, which ever is more frequent.

11. If the referenced permit contains permission to operate in excess of applicable emission standards during startup, the permittee shall keep a record of each startup, including information as to the length of time that such operation exceeded applicable standards and limitations, and a detailed explanation of why such startup was necessary.

12. If the referenced permit contains permission to operate in excess of applicable emission standards during malfunctions or breakdowns, the permittee shall immediately notify the Agency's regional Field Operations Section office by telegram upon occurrence of malfunction or breakdown, and comply with all directives of the regional office with respect to the incident. (See map on reverse side)

    The permittee shall maintain records of such malfunctions or breakdowns. These records shall include: a full and detailed explanation of why such breakdown occurred; the length of time during which operation continued under conditions of malfunction or breakdown; the measures the permittee used to reduce the length of time of such operation; and the steps the permittee will take to prevent future similar malfunctions or breakdowns. This record shall be available to any agent of the Environmental Protection Agency at any time during normal working and/or operating hours.

    The permittee shall not continue operation during malfunction or breakdown beyond such time as is necessary to prevent injury to persons or severe damage to equipment or to provide essential services.

Illinois Environmental Protection Agency 2200 Churchill Road, Springfield, Illinois 62706

217/782-2113

Permit Expiration Date: June 14, 1983

Application No.: 03010814
I.D. No.: 163121AAM FURNAC 3 & 4
Received: April 21, 1978
Operation of: Cerro Copper Products (excluding refuse incinerator)
Location: Mississippi Avenue at A & S Tracks, Sauget, Illinois

June 15, 1978

Cerro Copper Products Co.
Mississippi Avenue at Alton and
Southern Tracks
Sauget, Illinois 62202

Attention: Paul Tandler
Vice President-Manufacturing

Gentlemen:

Permit is hereby granted to operate the above-referenced equipment.

This permit is subject to the following conditions:

1. Standard conditions attached hereto and incorporated herein by reference.

2. The following special conditions:

   a. Operation is allowed during startup.

      Operation is allowed during malfunction or breakdown.

Very truly yours,

M. Paul Schmierbach, P.E.
Manager, Permit Section
Division of Air Pollution Control

MPS:AMT:jb/3402/12

EPA SGF

CERROBRAS SAUT

40 - 6430

005 6/13/78

MR. A. M. TELFORD
PERMIT SECTION
DIV. OF AIR POLLUTION CONTROL
ILLINNOOOIS EPA
2200 CHURCHILL ROAD
SPRINGFIELD, ILLINOIS 62704

RE: I.D. NO. 163-121-AAM
OPERATING PERMIT NO. 0-3010814

IN VIEW OF YOUR REQUEST TO CONDUCT A NEW STACK TEST ON OUR PLANT REFUSE INCINERATOR AND YOUR PRESENT DENIAL OF AN OPERATING PERMIT FOR SUCH INCINERATOR, IT IS HEREBY REQUESTED THAT YOU NOW ISSUE THE OPERATING PERMIT FOR ALL THE REMAINING EQUIPMENT COVERED BY PERMIT NO. 0-3010814, AND TO ALSO ISSUE A TEMPORARY OPERATING PERMIT FOR SAID INCINERATOR FOR A PERIOD NOT TO EXCEED SIX (6) MONTHS. WE ASK FOR THIS TIME TO ALLOW US TO PERFORM SCHEDULED REFRACTORY AND ALLOY STEEL REPAIRS, AS WELL AS TO PROPERLY CONDUCT THE STACK TESTS YOU HAVE INDICATED.

THANK YOU FOR YOUR COOPERATION.

PAUL TANDLER
VICE PRES. MANUFACTURING
CERRO COPPER PRODUCTS CO.
SAUGET, ILLINOIS

CC: MR. OTIS BANES

EPA SGF

PLEASE SEND THE FOLLOWING TELEX OR TELEGRAM TODAY. 6/13/78

MR. A. M. TELFORD
PERMIT SECTION
DIV. OF AIR POLLUTION CONTROL
ILLINOIS EPA
2200 CHURCHILL ROAD
SPRINGFIELD, ILLINOIS 62704

RE: I.D. NO. 163-121-AAM
OPERATING PERMIT NO. 0-3010814

IN VIEW OF YOUR REQUEST TO CONDUCT A NEW STACK TEST ON OUR PLANT REFUSE INCINERATOR AND YOUR PRESENT DENIAL OF AN OPERATING PERMIT FOR SUCH INCINERATOR, IT IS HEREBY REQUESTED THAT YOU NOW ISSUE THE OPERATING PERMIT FOR ALL OF THE REMAINING EQUIPMENT COVERED BY PERMIT NO. 0-3010814, AND TO ALSO ISSUE A TEMPORARY OPERATING PERMIT FOR SAID INCINERATOR FOR A PERIOD NOT TO EXCEED SIX (6) MONTHS. WE ASK FOR THIS TIME TO ALLOW US TO PERFORM SCHEDULED REFRACTORY AND ALLOY STEEL REPAIRS, AS WELL AS TO PROPERLY CONDUCT THE STACK TESTS YOU HAVE INDICATED.

THANK YOU FOR YOUR COOPERATION.

PAUL TANDLER
VICE PRES. MANUFACTURING
CERRO COPPER PRODUCTS CO.
SAUGET, ILLINOIS

cc: MR. OTIS BANES

bcc: R. E. Conreaux
J. C. Johnson
J. Schuster
File 1900 EPA (3)

CERRO COPPER PRODUCTS CO.
A Member of The Marmon Group
P.O. Box 681
East St. Louis, Illinois 62202
618/337-6000

May 25, 1978

Mr. A. M. Telford
Permit Section
Division of Air Pollution Control
Illinois Environmental Protection Agency
2200 Churchill Road
Springfield, Illinois 6270[illegible]

Re: I.D. No. 163-121-AAM

Dear Mr. Telford:

In accordance with our telephone conversation today, I am enclosing the results of our most recent stack test on the plant refuse incinerator which was conducted on June 9, 1976.

I trust that this information will enable you to proceed with the operating permit renewal on this operation, as well as all of the other plant operations covered by this permit.

Thank you for your past cooperation and helpful handling of our permit matters.

Yours very truly,

CERRO COPPER PRODUCTS CO.
A MEMBER OF THE MARMON GROUP

Paul Tandler
Vice President-Manufacturing

PT/bg
Attachments
bcc: Mr. Otis Banes
File

STACK EMISSION TESTS

CERRO COPPER PRODUCTS

INCINERATOR

JUNE 9, 1976

°F	CFM	SCFM	GRAINS PER SCF	POUNDS PER HOUR
337	20,641	13,808	0.027	3.19

STACK SAMPLING TEST RESULTS — PROJECT NUMBER

I. CERRO COPPER PRODUCTS
ST. LOUIS WORKS

II. Process: Incinerator

III. Test Run Number:

IV. Date & Time of Run: June 9, 1976 (1229-1329)

V. Meteorological Data: Barometric Pressure 30.10

Relative Humidity % saturation

Ambient Temperature 86 °F.

VI. Particulate Sampling Data:

General Description of Test Section

1. Position of stack at Sampling Station Vertical
2. General direction of gas flow in stack Up
3. Cross sectional area of stack 27.869sq.ft. 48 in. dia.
4. Number of points in pitot & sampling traverses 12 points; 2 perpendicular traverses

Dust Sampling Equipment Conditions

1.	Average meter temperature	100	°F.
2.	Average meter pressure	2.6	in. Hg Vac.
3.	Volume of gas sampled at meter cond.	21.93	C.F.
4.	Volume of condensate	77.50	cc.
5.	Weight of dust collected	0.0405	grams
6.	Diameter of sampling nozzle	.250	in.
7.	Actual sampling time	60	min.
	Outage Time:		

Stack Gas Conditions

1.	Average temperature in stack	337	°F.
2.	Static pressure in stack	-	in. Hg Abs.
3.	Average velocity in stack	27.5	fps
4.	Moisture content of stack gas	22.0	%
5.	Volume of stack gas at stack cond.	20,641	CFM
6.	Volume of stack gas at std. cond.	13,808	SCFM
7.	Dust concentration at std. cond.	0.027	gr/SCF
8.	Dust emission rate	3.19	lbs/hr

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

2200 Churchill Road Springfield, Illinois 62706

Dr. Richard H. Briceland, Director

AUGUST 21, 1974
PERMIT EXPIRATION DATE 08-14-76

CERRO COPPER PRODUCTS DIV OF CERRO
MISSISSIPPI AVE
SAUGET, IL.
62202

ATTENTION - PAUL TANDLER

REFERENCE
APPLICATION NO. - 02090197 - **Refuse Incinerator**
ID NUMBER - 163121AAM CPR PRDS
RECEIVED - 07-26-74
OPERATION OF - CERRO COPPER PRODUCTS
LOCATION - MISSISSIPPI AVE
SAUGET
ST CLAIR

GENTLEMEN:

PERMIT IS HEREBY GRANTED TO OPERATE THE ABOVE-REFERENCED EQUIPMENT.
THIS PERMIT IS SUBJECT TO THE FOLLOWING CONDITIONS:
1.STANDARD CONDITIONS ATTACHED HERETO AND INCORPORATED HEREIN BY REFERENCE.
2.THE FOLLOWING SPECIAL CONDITIONS:
OPERATION IS ALLOWED DURING STARTUP.
OPERATION IS ALLOWED DURING MALFUNCTION OR BREAKDOWN.

VERY TRULY YOURS,

Keith J. Conklin

KEITH J. CONKLIN, P.E.
MANAGER, PERMIT SECTION
DIVISION OF AIR POLLUTION CONTROL

HBD

09019

STATE OF ILLINOIS
ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF AIR POLLUTION CONTROL
2200 CHURCHILL ROAD
SPRINGFIELD, ILLINOIS 62706

RICHARD B. OGILVIE, GOVERNOR

WILLIAM L. BLASER, DIRECTOR

APPLICATION TO OPERATE
DURING
MALFUNCTIONS, BREAKDOWNS, OR STARTUPS

Refuse Incinerator

FOR OFFICIAL USE ONLY
I.D. NO.
PERMIT NO. 0
DATE

1. NAME OF OWNER:	2. NAME OF CORPORATE DIVISION OR PLANT (IF DIFFERENT FROM OWNER):	
Cerro Copper Products, a Div. of Cerro Corp.	Same	
3. TELEPHONE NUMBER:	4. TELEPHONE NUMBER:	
618-337-6000	Same	
5. STREET ADDRESS OF OWNER:	6. STREET ADDRESS OF EMISSION SOURCE:	
Mississippi Ave. at Alton & Southern Tracks	Same	
7. CITY:	8. CITY:	9. LOCATED WITHIN CITY LIMITS ☐ YES ☐ NO
Sauget		
10. STATE:	11. ZIP CODE:	12. TOWNSHIP:
Illinois	62202	13. ZIP CODE:

Section "A" -- Startups

The applicant shall submit the information requested in this Section for each emission source which during startup may exceed applicable emission standards, either alone or in combination with emissions from other similar emission sources located in the same plant or on the premises of the applicant.

1. For each such emission source and directly related equipment, submit the following information and attach to this application as Exhibit E:

   (a) Describe the startup procedure.
   (b) State the types and quanities of emissions that may occur during startup by completing Form APC-96. (Total number of Forms APC-96 included with this application:)
   (c) Describe those procedures the applicant will take during startup to reduce the emissions.
   (d) Describe the frequency and duration of startups.
   (e) Describe all measures the applicant will take to minimize the frequency and duration of startups.

Total number of pages in Exhibit E:

Section "B"--Malfunctions and Breakdowns

The applicant shall submit the information requested in this Section for each item of source equipment that the applicant requests permission to operate during a malfunction or breakdown, in which such operation would result in a discharge of emission of contaminants in excess of applicable emission standards, either alone or in combination with emissions from other similar emission sources located in the same plant or on the premises of the applicant.

1. For each such emission source and directly related equipment, submit the following information and attach to this application as Exhibit F:

   (a) State the type and quantity of emissions that may occur during malfunction or breakdown by completing Form APC-96. (Total number of forms APC-96 included with this application: 6)
   (b) Describe the extent to which discontinued operation of this equipment would: (A) cause or tend to cause injury to persons or severe damage to equipment; or (B) prevent the applicant from providing essential services to the public.
   (c) State the anticipated length of time the equipment will continue to operate during the malfunction or breakdown, including an explanation why this length of time is necessary.
   (d) Describe all measures the applicant will take to minimize the duration of a malfunction or breakdown.
   (e) Describe all measures the applicant will take to minimize the quantity of air contaminant emissions that may occur during a malfunction or breakdown.

Total number of pages in Exhibit F: 2

b & c) No serious damage would be caused by a malfunction of the pollution control equipment.

d & e) No additional refuse would be added while charge is allowed to burn down.

STATE OF ILLINOIS
ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF AIR POLLUTION CONTROL
2200 CHURCHILL ROAD
SPRINGFIELD, ILLINOIS 62706

090197

RICHARD B. OGILVIE, GOVERNOR
WILLIAM L. BLASER, DIRECTOR

EMISSIONS DURING
MALFUNCTIONS, BREAKDOWN OR STARTUP

Refuse Incinerator

FOR OFFICIAL USE ONLY
I.D. NO.
PERMIT NO.
DATE

1. NAME OF OWNER:
Cerro Copper Products, a Div. of Cerro Corp.

2. NAME OF CORPORATE DIVISION OR PLANT (IF DIFFERENT FROM OWNER):
Same

3. STREET ADDRESS OF EMISSION SOURCE:
Mississippi Ave. at Alton & Southern Tracks.

4. CITY:
Sauget, Illinois

NOTE: 1. APPLICANT MUST SUBMIT TWO COPIES OF THE EMISSION DURING MALFUNCTIONS, BREAKDOWN, OR STARTUP FORM APC-96.

2. EACH SUCH EMISSION SOURCE SHALL BE CLEARLY LABELED ON THE ATTACHED PROCESS FLOW DIAGRAM.

ANALYSIS OF EXHAUST GAS TO THE AMBIENT AIR

NOTE: IF THE EMISSION SOURCE WHICH IS THE SUBJECT OF THIS APPLICATION IS SERVED BY MORE THAN ONE EXHAUST STACK OR VENT, THE APPLICANT SHALL COMPLETE SEPARATE SHEETS FOR EACH SUCH STACK OR VENT.

CONTAMINANT	CONCENTRATION	EMISSION RATE	METHOD OF MEASURE AND ANALYSIS	METHOD OF MONITORING
14. CARBON MONOXIDE	a. PPM	b. LB/HR	c.	d.
15. CARBON DIOXIDE	a. PPM	b. LB/HR	c.	d.
16. CHLORINE	a. PPM	b. LB/HR	c.	d.
17. HYDROCARBONS AS CH_4	a. PPM	b. LB/HR	c.	d.
18. HYDROGEN CHLORIDE	a. PPM	b. LB/HR	c.	d.
19. HYDROGEN SULFIDE	a. PPM	b. LB/HR	c.	d.
20. NITROGEN	a. PPM	b. LB/HR	c.	d.
21. NITROGEN OXIDES AS NO_2	a. PPM	b. LB/HR	c.	d.
22. SULFUR DIOXIDE	a. PPM	b. LB/HR	c.	d.
23. OTHER (SPECIFY)	a. PPM	b. LB/HR	c.	d.
24. PARTICULATE MATTER	a. 32 PPM	b. 6 LB/HR	c. Estimate based on Manufacturers Specifications.	

25. PARTICULATE MATTER COMPOSITION EXPRESSED AS PERCENT BY WEIGHT OF EACH COMPONENT (COMMON NAME SHALL BE GIVEN IF CHEMICAL NAME IS UNKNOWN).

26. IF OTHER EMISSION SOURCES OR AIR POLLUTION CONTROL EQUIPMENT ARE EXHAUSTED THROUGH THE STACK OR VENT SERVING THE EQUIPMENT COVERED BY THIS APPLICATION, THE APPLICANT SHALL DEFINE THE EMISSIONS FROM SUCH OTHER EQUIPMENT AND ATTACH SUCH INFORMATION TO THIS APPLICATION AS EXHIBIT G.

TOTAL NUMBER OF PAGES IN EXHIBIT G: _____

CERRO COPPER PRODUCTS

DIVISION OF CERRO CORPORATION

ST. LOUIS WORKS
P. O. BOX 681
EAST ST. LOUIS, ILLINOIS 62202
618-337-6000

January 4, 1973

Environmental Protection Agency
Division of Air Pollution Control
115a West Main Street
Collinsville, Illinois 62234

Attention: Mr. W. H. Franke
Supervisor, Region IV

RE: Incinerator Operating Permit

Dear Mr. Franke:

This will acknowledge receipt of your letter mailed on December 22, 1972, with Forms APC-92 enclosed, calling to our attention the requirements for Incinerator Operating Permits.

On September 11, 1972, our Company filed Applications for Operating Permits for all of our source units, including the plant refuse incinerator, which is operating under Permit No. I-70-118. This Application for Operating Permits was approved on December 1, 1972, for a period ending October 26, 1974, and included subject incinerator.

I visited your offices yesterday morning and spoke to Mr. Joe Burroughs about this. He assured me that the recently granted Operating Permit was satisfactory, and that no additional application was needed.

I trust that this takes care of the matter.

Yours very truly,

CERRO COPPER PRODUCTS
DIVISION OF CERRO CORPORATION

P. Tandler, Director
Environmental & Safety Systems

PT:njw

bcc: W. E. Dunnick
J. W. Goldenberg (Encl.)
J. A. Staples
File 1900-EPA

ENVIRONMENTAL PROTECTION AGENCY • STATE OF ILLINOIS
William L. Blaser, Director • Richard B. Ogilvie, Governor

December 1, 1972

Permit Expiration Date: 10/26/74

CERRO COPPER PRODUCTS
Mississippi Ave. at Alton & Southern Tracks
Sauget, Illinois 62202

Attention: Mr. W. E. Dunnick

Reference
Application No. - 0 2 09 0197
I. D. No. - 163 121 AAM
Received - 09/12/72
Operation of - Cerro Copper Products
Location - Mississippi Ave. at Alton & Southern Tracks
Sauget, Illinois
St. Clair County

Gentlemen:

Permit is hereby granted to operate the above-referenced equipment.

This permit is subject to the following conditions:

1. Standard conditions attached hereto and incorporated herein by reference.

2. The following special condition:

Operation is allowed during malfunction or breakdown.

3. Operation of the Anode Furnaces number 3 and 4 during malfunction or breakdown is limited to a maximum of 10 hours from the time of the malfunction of the air pollution control equipment.

12-6-72
Copied / W. E. Dunnick
cc: P. Randler -
"Please enlighten me on this."
RJS:br
WED/dr

Very truly yours,

Keith J. Conklin, P.E.
Manager, Permit Section
Division of Air Pollution Control

STATE OF ILLINOIS
ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF AIR POLLUTION CONTROL
2200 CHURCHILL ROAD
SPRINGFIELD, ILLINOIS 62706

RICHARD B. OGILVIE, GOVERNOR
WILLIAM L. BLASER, DIRECTOR

PREVIOUSLY GRANTED INSTALLATION OR CONSTRUCTIONS PERMITS INCORPORATED BY REFERENCE

FOR OFFICIAL USE ONLY
I.D. NO. ☐☐☐☐☐☐☐☐☐
PERMIT NO. 0 ☐☐☐☐☐☐☐
DATE

1. NAME OF OWNER: Cerro Copper Products, a Div. of Cerro Corp.
2. NAME OF CORPORATE DIVISION OR PLANT: Same
3. STREET ADDRESS OF EMISSION SOURCE: Mississippi Ave. at Alton & Southern Tracks
4. CITY: Sauget, Illinois
5. DATE FORM APC-93 PREPARED: 8/30/72

PERMIT NUMBER	ARE THE DATA AND INFORMATION PREVIOUSLY SUBMITTED TRUE, CORRECT, AND CURRENT?*		HAVE ALL CONDITIONS OF THE PERMIT BEEN COMPLIED WITH?**		YOUR IDENTIFICATION (OPTIONAL)
CE 71002 — #3+4 Press #6 Billet	[X] YES	☐ NO	[X] YES	☐ NO	
CE 71-91-1 — Copper Bend	[X] YES	☐ NO	[X] YES	☐ NO	
CE 71-290 — [illegible]	[X] YES	☐ NO	[X] YES	☐ NO	
(1-70-118) Refuse Incineration	[X] YES	☐ NO	[X] YES	☐ NO	
CE 71-359 — Vapor Degreaser	[X] YES	☐ NO	[X] YES	☐ NO	
	☐ YES	☐ NO	☐ YES	☐ NO	
	☐ YES	☐ NO	☐ YES	☐ NO	
	☐ YES	☐ NO	☐ YES	☐ NO	
	☐ YES	☐ NO	☐ YES	☐ NO	
	☐ YES	☐ NO	☐ YES	☐ NO	
	☐ YES	☐ NO	☐ YES	☐ NO	
	☐ YES	☐ NO	☐ YES	☐ NO	
	☐ YES	☐ NO	☐ YES	☐ NO	
	☐ YES	☐ NO	☐ YES	☐ NO	
	☐ YES	☐ NO	☐ YES	☐ NO	
	☐ YES	☐ NO	☐ YES	☐ NO	
	☐ YES	☐ NO	☐ YES	☐ NO	
	☐ YES	☐ NO	☐ YES	☐ NO	
	☐ YES	☐ NO	☐ YES	☐ NO	
	☐ YES	☐ NO	☐ YES	☐ NO	

* IF "NO" COMPLETE CONSTRUCTION PERMIT APPLICATIONS AS APPLICABLE.

** IF "NO" EXPLAIN IN DETAIL AND MARK EXPLANATION AS EXHIBIT A.

TOTAL NUMBER OF PAGES IN EXHIBIT A: ________

APC-93

090197

CERRO COPPER PRODUCTS
DIVISION OF **CERRO CORPORATION**

ST. LOUIS WORKS
P. O. BOX 681
EAST ST. LOUIS, ILLINOIS 62202
618-337-6000

September 11, 1972

Mr. Keith J. Conklin
Manager, Permit Section
Division of Air Pollution Control
2200 Churchill Road
Springfield, Illinois 62706

Re: Permit Application of Cerro Copper Products, a Division of Cerro Corporation
I.D. No. 345640

Dear Mr. Conklin:

Enclosed is a completed Operating Permit Application for the above plant covering various operations including copper melting and refining, billet heating, annealing, vapor degreasing, steam generation, and refuse incineration.

A process flow sheet and plant property layout drawing together with authorization forms are also included.

The numerical data on installations currently not covered by permits had to be assembled on a "best effort" basis due to the short time available since Permit Application procedures were announced and forms were made available. We therefore reserve the right to submit corrected figures, where applicable, if the data submitted proves to be inaccurate, following further tests and/or calculations. We solicit your indulgence in this respect.

Very truly yours,

CERRO COPPER PRODUCTS
Division of CERRO CORPORATION

Paul Tandler
Technical Manager

PT/as

RICHARD B. OGILVIE
Governor

WILLIAM L. BLASER
DIRECTOR

STATE OF ILLINOIS

ENVIRONMENTAL PROTECTION AGENCY

ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF AIR POLLUTION CONTROL
115A WEST MAIN
COLLINSVILLE, ILLINOIS 62234

Dear

On April 14, 1972, the Pollution Control Board adopted new air pollution control regulations for the State of Illinois. Included in these regulations is the requirement that an Operating Permit be obtained to operate any emission source. Specific dates have been established when permits for various types of emission sources are required and applications for permits must be submitted ninety days prior to the permit due date.

We bring this to your attention because our records indicate that you own or operate an incinerator. Incinerators are considered sources of air pollution emissions and permits are required by April 1, 1973. Applications must be submitted by January 1, 1973.

In order to expedite this matter we have included three copies of form A.P.C. - 92 which is to be completed and submitted to the Illinois Environmental Protection Agency. Forms are to be mailed to:

Mr. Keith Conklin
Permits Section
Illinois E.P.A.
Air Pollution Control
200 W. Washington
Springfield, Illinois 62706

Please submit two copies to the Agency and retain one for your records. Additional copies of forms are available from this E.P.A. regional office.

Each week the regional office is conducting workshops to give assistance to anyone who desires help in completing permit applications. Attendance is by reservation which can be arranged by contacting one of our engineers.

Please do not hesitate to contact this office if you have any questions. Our phone number is 345-0700.

Yours truly,

W. H. Franke, Supervisor, Region IV
Division of Air Pollution Control

WHF:rf
Enclosure
cc: Region 4

INCINERATOR

RICHARD B. OGILVIE
Governor

William L. Blaser
XXXXXXXXXXXXXXXXX
Director

STATE OF ILLINOIS

ENVIRONMENTAL PROTECTION AGENCY

March 16, 1971

In Reply Refer To:
APC/FC

ST. CLAIR CO/SAUGET
I 70 118

Cerro Copper and Brass Co.
St. Louis Works
P.O. Box 681
East St. Louis, Illinois 62202

Attention: W.E. Dunnick

Gentlemen:

Permit is hereby granted to operate the FG4-36 incinerator located at Sauget, Illinois, which was constructed pursuant to installation permit #I 70 118 I. This device was inspected by staff engineers Joe Burroughs, Clarence Beck and A. M. Telford, on March 2, 1971.

This permit is issued subject to the standard conditions put forth on page 2, attached hereto and incorporated herein by reference.

Very truly yours,

Robert R. French, Chief
Bureau of Air Pollution Control

Copies To:
J.W. Goldenberg
F. Ehrhardt
R.W. Johnson
File 4108/1900 Ill. B
5/?/71 W.G. Graff
A. Goldenhersh

This permit is granted in accordance with requirements of "Rules and Regulations Governing the Control of Air Pollution" as authorized by the "Environmental Protection Act" approved June 29, 1970, and is subject to the following conditions:

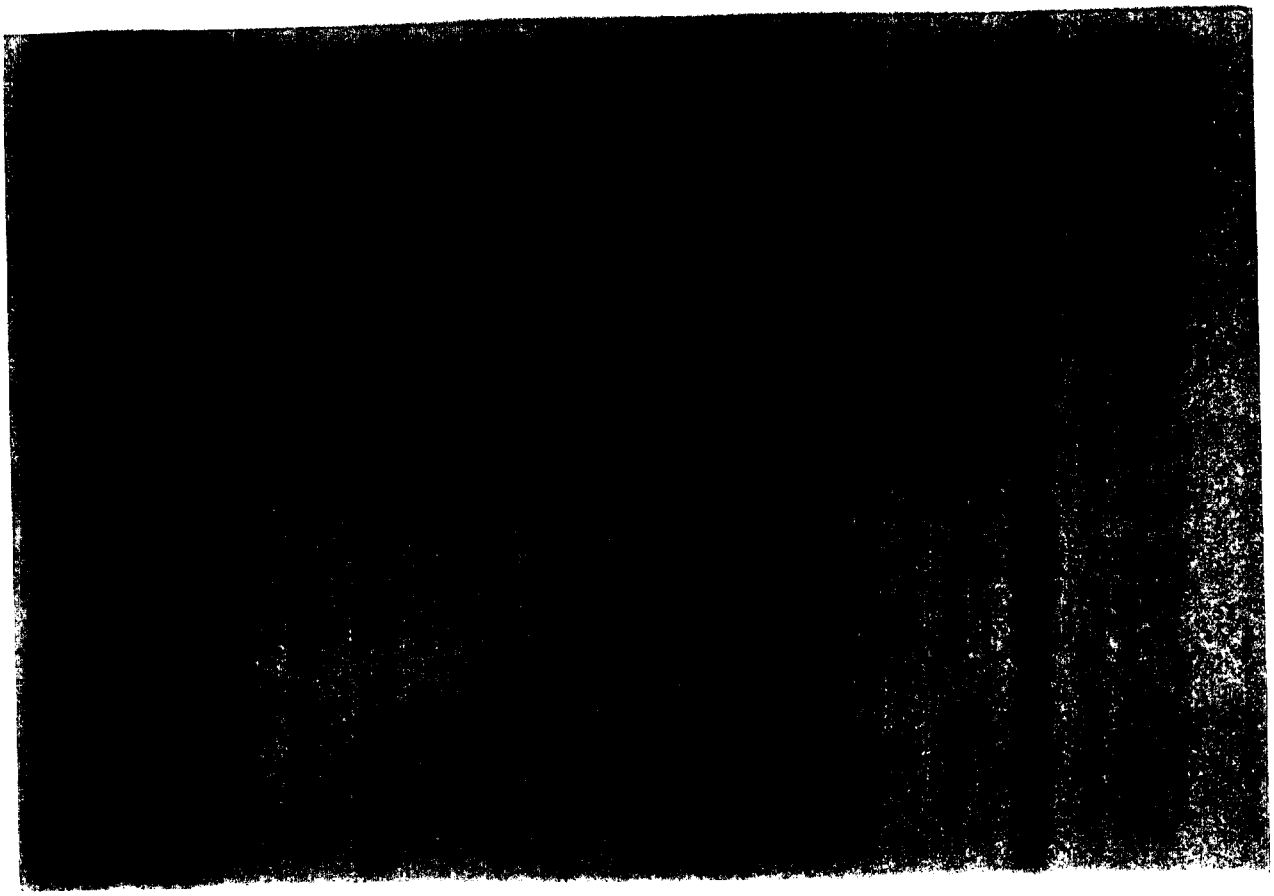
1. If any statement or representation in the application is incorrect, this permit is void and the permitteee thereupon waives all rights thereunder.

2. There shall be no deviation from the approved plans and specifications unless additional or revised plans are submitted to the Environmental Protection Agency and a supplemental written permit issued.

3. At any time during or after the construction or the installation of the equipment for which this permit was issued, any agent of the Environmental Protection Agency shall have the right and authority to inspect such equipment.

4. This authority, (a) shall not in any manner affect the title to the premises upon which the equipment is to be located, (b) does not release the permittee from any liability for any loss due to damage to person or property caused by, resulting from or arising out of the design installation, maintenance, or operation of the proposed equipment, (c) does not release the permittee from compliance with other applicable statutes of the State of Illinois, or with applicable local laws, regulations or ordinances. (d) in no manner implies or suggests that the Environmental Protection Agency, or its officers, agents or employees, assumes any liability, directly or indirectly, for any loss due to damage to person or property caused by, resulting from or arising out of the design installation, maintenance, or operation of the proposed equipment.

5. This permit is subject to review and change by the Environmental Protection Agency as deemed necessary to fulfill the intent and purpose of the Environmental Protection Act and Regulations thereunder promulgated.



1900
Ill. Board

BRULÉ INCINERATORS
13920 South Western Avenue, Blue Island, Illinois 60406

Telephone: 388-7900
Area Code 312
Cable Address: BRUINCIN

August 22, 1970

Mr. Joe Goldenberg,
Cerro Copper & Brass Company
Division of Cerro Corporation
St. Louis Works
P.O. Box 681
East St. Louis, Illinois 62202

Subject: Brule' Model FG4-36 Waste Disposal Incineration System for
Cerro Copper & Brass - Cerro P.O. No. 28660 - Brule' Contract No.C70-0942

Dear Mr. Goldenberg:

Confirming our telephone conversation yesterday, we talked to Mr. Abraham Kobressi of the State of Illinois Environmental Protection Agency, and after checking he was advised that the State Permit for the subject project had been approved; he agreed to go to the Director's Office to pick it up; and to mail it to you yesterday afternoon.

If you do not receive the permit in Monday's mail, please telephone me so that I may pursue it with Mr. Kobrossi - he promised to telephone me yesterday afternoon, if for any reason the approved permit had not been mailed.

Yours truly,

Brule' ("Bru-lay") Incinerators
Brule' C. E. & E. Inc.

E. T. Sherwin - Vice President
Engineering & Research

ets/eps

cc/ Mr. W. G. Greff

STATE OF ILLINOIS

ENVIRONMENTAL PROTECTION AGENCY

File 1905
Ill. Bonds

SPRINGFIELD, ILLINOIS 62706
AREA 217 - 525-6580

August 20, 1970

ST. CLAIR CO/SAUGET
I 70 118 I

In Reply Refer To:
APC/IK

Cerro Copper and Brass
P.O. Box 681
Sauget, Illinois

Gentlemen:

Permit is hereby granted to Cerro Copper and Brass to install a model FG4-36 Brule' incinerator at your facilities located at Sauget, Illinois. This incinerator was described by submitted drawings. The completed installation permit application for incinerators was received on July 1, 1970, from Mr. E.T. Sherwin of Brule' Incinerators.

This permit is issued subject to the standard conditions set forth on Page 2 attached hereto and incorporated herein by reference.

Very truly yours,

C.W. Klassen

C.W. Klassen
Director

This permit is granted in accordance with requirements of "Rules and Regulations Governing the Control of Air Pollution" as authorized by the "Environmental Protection Act" approved June 29, 1970, and is subject to the following conditions:

1. If any statement or representation in the application is incorrect, this permit is void and the permittee thereupon waives all rights thereunder.

2. There shall be no deviation from the approved plans and specifications unless additional or revised plans are submitted to the Environmental Protection Agency and a supplemental written permit issued.

3. At any time during or after the construction or the installation of the equipment for which this permit was issued, any agent of the Environmental Protection Agency shall have the right and authority to inspect such equipment.

4. This authority, (a) shall not in any manner affect the title to the premises upon which the equipment is to be located, (b) does not release the permittee from any liability for any loss due to damage to person or property caused by, resulting from or arising out of the design installation, maintenance, or operation of the proposed equipment, (c) does not release the permittee from compliance with other applicable statutes of the State of Illinois, or with applicable local laws, regulations or ordinances. (d) in no manner implies or suggests that the Environmental Protection Agency, or its officers, agents or employees, assumes any liability, directly or indirectly, for any loss due to damage to person or property caused by, resulting from or arising out of the design installation, maintenance, or operation of the proposed equipment.

5. This permit is void one year from the date of issue unless installation of this project has started on or prior to date of expiration.

6. This permit is subject to review and change by the Environmental Protection Agency as deemed necessary to fulfill the intent and purpose of the Environmental Protection Act and Regulations thereunder promulgated.

7. That only type 1 and 5 waste is burned in the incinerator at rates not greater than 4500 pounds per hour.

8. That the manufacturers instructions for operating the incinerator and auxiliary burners are followed by all who use this equipment.

1900
Ill. Boards

E.T.S.

ENVIRONMENTAL PROTECTION AGENCY

SPRINGFIELD, ILLINOIS 62706
AREA 217 – 525-6580

FILE N/05 38-68 RJ

August 20, 1970

ST. CLAIR CO/SAUGET
I 70 118 I

In Reply Refer To:
APC/IK

Cerro Copper and Brass
P.O. Box 681
Sauget, Illinois

Gentlemen:

Permit is hereby granted to Cerro Copper and Brass to install a model FG4-36 Brule' incinerator at your facilities located at Sauget, Illinois. This incinerator was described by submitted drawings. The completed installation permit application for incinerators was received on July 1, 1970, from Mr. E.T. Sherwin of Brule' Incinerators.

This permit is issued subject to the standard conditions set forth on Page 2 attached hereto and incorporated herein by reference.

Very truly yours,

C.W. Klassen

C.W. Klassen
Director

RECEIVED
AUG 26 1970
BRULE' INCINERATORS

MY REFERENCE

This permit is granted in accordance with requirements of "Rules and Regulations Governing the Control of Air Pollution" as authorized by the "Environmental Protection Act" approved June 29, 1970, and is subject to the following conditions:

1. If any statement or representation in the application is incorrect, this permit is void and the permittee thereupon waives all rights thereunder.

2. There shall be no deviation from the approved plans and specifications unless additional or revised plans are submitted to the Environmental Protection Agency and a supplemental written permit issued.

3. At any time during or after the construction or the installation of the equipment for which this permit was issued, any agent of the Environmental Protection Agency shall have the right and authority to inspect such equipment.

4. This authority, (a) shall not in any manner affect the title to the premises upon which the equipment is to be located, (b) does not release the permittee from any liability for any loss due to damage to person or property caused by, resulting from or arising out of the design installation, maintenance, or operation of the proposed equipment, (c) does not release the permittee from compliance with other applicable statutes of the State of Illinois, or with applicable local laws, regulations or ordinances. (d) in no manner implies or suggests that the Environmental Protection Agency, or its officers, agents or employees, assumes any liability, directly or indirectly, for any loss due to damage to person or property caused by, resulting from or arising out of the design installation, maintenance, or operation of the proposed equipment.

5. This permit is void one year from the date of issue unless installation of this project has started on or prior to date of expiration.

6. This permit is subject to review and change by the Environmental Protection Agency as deemed necessary to fulfill the intent and purpose of the Environmental Protection Act and Regulations thereunder promulgated.

7. That only type 1 and 5 waste is burned in the incinerator at rates not greater than 4500 pounds per hour.

8. That the manufacturers instructions for operating the incinerator and auxiliary burners are followed by all who use this equipment.

STATE OF ILLINOIS
AIR POLLUTION CONTROL BOARD
616 STATE OFFICE BUILDING
SPRINGFIELD, ILLINOIS 627[illegible]

FOR INFORMATION TELEPHONE 525-7327
(AREA 217)

RECEIVED
JUL [illegible] 1970

TECHNICAL SECRETARY
CLARENCE W. KLASSEN
Chief Sanitary Engineer
Department of Public Health
Telephone 525-6580 (Area 217)

ENVIRONMENTAL PROTECTION AGENCY
STATE OF ILLINOIS
[illegible] USE ONLY
Permit No. ______
Date Examined ______ By ______

INSTALLATION PERMIT APPLICATION FOR INCINERATORS

Name of Owner: [illegible]rro Copper & Brass	Address of Owner: P. O. Box 681, Sauget (E. St. Louis), Illinois
Name and Title of Person Preparing Application: [illegible] T. Shanlin, Vice Pres., Eng. & Research, Brule' Incinerators	Signature: [signature]
Name of Installation: [illegible]rro Copper & Brass	Address of Installation: (Street, City, County, Zip Code) Sauget, Illinois

[illegible] Inside incorporated limits – city named ☐ Outside limits in ______ Township

Description or source of waste: General plant trash & waste oil	Type waste: 1 & 5	BTU/LB (as fired): 7400 avg.	Daily amount: 27,000 (LBS)(GAL)	☒ Estimated ☐ Actual

Basis of estimate: (Indicate number units and size area served, include food service areas)

Make of incinerator: Brule'	Model No.: FG4-36	Class: III	Rated capacity (lb./hr.): 4500	Spark arrester: Material and size openings
Operated: Six hrs/day		Storage capacity for waste: In-Plant containers cu. ft.		Installation: ☐ Indoors ☒ Outdoors
Total heat release (entire unit): 10,400 BTU/hr./cu.ft.		Charging method: ☐ Top ☒ Side ☐ End		Have NFPA standards been complied with: ☒ Yes ☐ No
% Excess air: 100		% Air applied as overfire: 70		

PRIMARY COMBUSTION CHAMBER

Volume: 1800 cu.ft.	Effective grate area: 210 (total) sq.ft.	Hearth area: Incl. with grates sq.ft.	Total heat release: 18,500 BTU/hr./cu.ft.

SECONDARY COMBUSTION CHAMBER

Volume: 1400 cu.ft.	Maximum gas velocity @ 1400 °F. in flame port: 37.6 FPS	Retention time of gas in settling chamber @ 1400 °F.: 0.47 sec.

AUXILARY BURNERS

Type and fuel: Brule' Gas	Number: 2	Capacity of each: ~~6,000,000~~ 4,000,000 BTU./hr.	Flame failure control: Yes	Timer (max. time) hrs.

DAMPERS

☐ Horizontal sliding ☐ Guillotine ☐ Butterfly ☒ Barometric 48 Dia (inches)

DRAFT

☐ Natural ☒ Induced ☐ Forced 38,000 CFM at 300 °F

OVERLAPS

Between the top of the bridgewall and bottom of curtain wall: 27" inches

Between the bottom of curtain wall and top paving in flue connection: 72" inches

[signature]

GAS CLEANING DEVICES

Type: [illegible] Scrubber	Manufacturer: Brule'	Capacity: 20,000 SCFM	Efficiency: 90

STACK

Height above grade: 22 ft.	Materials of construction: Steel	Inside diameter: 44" x 44" inches
[illegible] nearest obstruction: 20	Distance to nearest obstruction: 125	

[illegible]: [illegible] soon as possible

[illegible] in plan elevation and as many sections as are necessary to show the design, operation and location of the incinerator [illegible] and auxilary gas cleaning devices, if used, and flame port dimensions.

[illegible]: [illegible],000	Cost of gas cleaning devices: 70,000
Date applied for:	No. of tax form:

CALCULATIONS FOR

CERRO COPPER & BRASS

Sauget (E. St. Louis), Illinois

WASTE - CLASSIFICATIONS

Waste Type 1

25,000 LBS/DAY

Waste Type 5

Waste Oil 220 GAL/DAY = 220 X 8 = 1,760 LBS/DAY
Mold Wash 30 GAL/DAY = 30 X 8 = 240 LBS/DAY

TOTAL LIQUID WASTE = 2,000 LBS/DAY

BTU Value of Liquid Waste as Fired = 18,750 BTU/LB

Heat Generated BTU/LB Combining Waste Type 1 and Type 5

$$\frac{25,000 \times 6,500 + 18,750 \times 2,000}{25,000 + 2,000} = \frac{162,500,000 + 37,500,000}{27,000} = \frac{200,000,000}{27,000} = 7,400 \text{ BTU/LB}$$

TOTAL WASTE BURNED/HR = $\frac{27,000}{6}$ = 4,500 LBS/HR

HEAT RELEASE/HR = 4,500 X 7,400 = 33,300,000 BTU/HR

TOTAL PRIMARY CHAMBER VOLUME - 1800 CU. FT. (Min.)

UNIT HEAT RELEASE RATIO = $\frac{33,300,000}{1,800}$ = 18,500 BTU/CU. FT./HR

Exhibit F

ENVIRONMETRICS
2345 Millpark Drive
Maryland Heights, MO 63043
(314) 427-0550

CERRO COPPER
PO BOX 66800
ST. LOUIS, MO 63166-6800

ATTN: JOHN STAPLES

INVOICE # 12244
PO # 96058

ANALYSIS RESULTS

Billet Casting Cooling Tower Solids ←

SAMPLE ID: BLDG. 19-CWS JDB-031991-1 3/19/91
LAB ID: 9103828

TEST PERFORMED	METHOD OF ANALYSIS	RESULTS
TCLP EXTRACTION	SW-846 1311	
RCRA METALS ANALYSIS	SW-846 6010	EXTRACTION
ARSENIC		<0.200 mg/l
BARIUM		1.65
CADMIUM		0.076
CHROMIUM		0.015
LEAD		0.873
SELENIUM		<0.200
SILVER		<0.040
MERCURY	EPA 245.1	<0.0005

MARCH 22, 1991

WAYNE L. COOPER
LABORATORY DIRECTOR

ENVIRONMETRICS
2345 Millpark Drive
Maryland Heights, MO 63043
(314) 427-0550

CERRO COPPER
PO BOX 66800
ST. LOUIS, MO 63166-6800

ATTN: JOHN STAPLES

INVOICE # 12318
PO # 96058

ANALYSIS RESULTS

SAMPLE ID: BLDG 19-CWS JDB 031991-1
LAB ID: 9103828

TEST PERFORMED	METHOD OF ANALYSIS	RESULTS
RCRA METALS ANALYSIS	SW-846 6010	TOTAL
ARSENIC		4.70 mg/kg
BARIUM		189
CADMIUM		6.60
CHROMIUM		14.7
COPPER		4,046
HEXAVALENT CHROMIUM		<0.2
LEAD		246
NICKEL		8.90
SELENIUM		2.42
SILVER		<0.40
ZINC		388
MERCURY	SW-846 7471	<0.5
IGNITABILITY (SETAFLASH)	SW-846 1020	>200 (F)
CORROSIVITY (pH) 10.0%	SW-846 9045	8.3
REACTIVE CYANIDE	SW-846 9010	<0.2 mg/kg
REACTIVE SULFIDES	SW-846 9030	<0.2 mg/kg
PHENOLS	SW-846 9065	1.01 mg/kg
TOTAL SOLIDS	EPA 160.1	42.03 %
TOTAL ORGANIC HALIDES	SW-846 5320	1.6 mg/kg

NOTE: SAMPLE WAS TESTED ON A DRY WEIGHT BASIS.

MARCH 27, 1991

WAYNE L. COOPER
LABORATORY DIRECTOR

ENVIRONMETRICS
2345 Millpark Drive
Maryland Heights, MO 63043
(314) 427-0550

CERRO COPPER
PO BOX 66800
ST. LOUIS, MO 63166-6800

ATTN: JOHN STAPLES

INVOICE # 12318
PO # 96058

TCLP VOLATILE ORGANIC ANALYSIS
METHOD SW-846 8240

SAMPLE ID: TCLP BLANK
LAB ID: TVBLK085A

CAS NUMBER		DETECTION LIMIT	RESULTS
75-01-4	Vinyl Chloride	100 µg/l	ND µg/l
75-35-4	1,1-Dichloroethene	50	ND
67-66-3	Chloroform	200	ND
107-06-2	1,2-Dichloroethane	50	ND
78-93-3	2-Butanone	150	280
56-23-5	Carbon Tetrachloride	50	ND
79-01-6	Trichloroethene	50	ND
71-43-2	Benzene	50	ND
127-18-4	Tetrachloroethene	50	ND
108-90-7	Chlorobenzene	50	ND
	1,4-Dichlorobenzene	100	ND

ND = BELOW DETECTION LIMIT

MARCH 27, 1991

WAYNE L. COOPER
LABORATORY DIRECTOR

ENVIRONMETRICS

2345 Millpark Drive
Maryland Heights, MO 63043
(314) 427-0550

CERRO COPPER
PO BOX 66800
ST. LOUIS, MO 63166-6800

ATTN: JOHN STAPLES

INVOICE # 12318
PO # 96058

TCLP VOLATILE ORGANIC ANALYSIS
METHOD SW-846 8240

SAMPLE ID: BLDG 19-CWS JDB 031991-1
LAB ID: 9103828

CAS NUMBER		DETECTION LIMIT	RESULTS
75-01-4	Vinyl Chloride	100 µg/l	ND µg/l
75-35-4	1,1-Dichloroethene	50	ND
67-66-3	Chloroform	200	ND
107-06-2	1,2-Dichloroethane	50	ND
78-93-3	2-Butanone	150	ND
56-23-5	Carbon Tetrachloride	50	ND
79-01-6	Trichloroethene	50	ND
71-43-2	Benzene	50	ND
127-18-4	Tetrachloroethene	50	ND
108-90-7	Chlorobenzene	50	ND
	1,4-Dichlorobenzene	100	ND

TCLP SEMIVOLATILE ORGANIC COMPOUNDS
METHOD SW-846 8270

SAMPLE ID: BLDG 19-CWS JDB 031991-1
LAB ID: 9103828

CAS NUMBER		DETECTION LIMIT	RESULTS
110-89-4	Pyridine	500 µg/l	ND µg/l
106-46-7	1,4-Dichlorobenzene	100	ND
95-48-7	o-Cresol	100	ND
106-44-5	m & p-Cresol	100	ND
67-72-1	Hexachloroethane	100	ND
98-95-3	Nitrobenzene	100	ND
87-68-3	Hexachlorobutadiene	100	ND
88-06-2	2,4,6-Trichlorophenol	100	ND
95-95-4	2,4,5-Trichlorophenol	100	ND
121-14-2	2,4-Dinitrotoluene	100	ND
118-74-1	Hexachlorobenzene	100	ND
87-86-5	Pentachlorophenol	100	ND

ND = BELOW DETECTION LIMIT

MARCH 27, 1991

WAYNE L. COOPER
LABORATORY DIRECTOR

PO: 96058

CHAIN OF CUSTODY - SOLID WASTE
CERRO COPPER PRODUCTS- SAUGET, ILLINOIS

JOB-031991-1

SAMPLE NAME: CASTING WELL SOLIDS SAMPLE I.D. #: BLDG 19 - CWS

SAMPLING DATE: 3/19/91 TIME: 10:15 SAMPLER'S INITIALS: JDB

SAMPLE TRANSPORTATION

SAMPLE CARRIER: D. Brannigan #57 (sign) DATE: 3/19/91 TIME: 10:20

SAMPLES REC'D : By Lab Janice Lyons (sign) DATE: 3/19/91 TIME: 11:45 AM

LABORATORY WORK

LABORATORY: ENVIRONMETRICS PHONE: 314-427-0550

ADDRESS: CONTACT: WAYNE COOPER

LAB I.D.: 9135SS

✓ TCLP METALS (8)	PAINT FILTER TEST	✓ Phenol
✓ TCLP ORGANICS (25)	✓ IGNITABILITY (<140F)	TOC
TCLP PESTICIDES(4)	✓ CORROSIVITY (pH OF 10% SOLN.)	✓ TOX or EOX
TCLP HERBICIDES(2)	✓ REACTIVITY (CN & Sulfide)	[redacted]
	✓ Total Solids (%)	PCB

5 day RUSH

Comments: 1. ALL ANALYSIS IS TO BE PERFORMED IN ACCORDANCE WITH SW846

Analysis Requested by: _____

Problems or Question Please Call Representatives Below
Cerro Copper: Joseph Grana or Joe Burroughs (618)337-6000

Copy Distribution of Chain-of-Custody
Goldenrod:Sampler's Copy Pink:Transporter leaves @ Cerro after signing
Yellow:Lab's Copy White:Lab returns to Cerro after analysis

* ON DRY WT. BASIS

ENVIRONMENTAL MONITORING AND TECHNOLOGIES, INC.

8100 North Austin Avenue
Morton Grove, Illinois 60053-3203
708/967-6666
FAX: 708/967-6735

LABORATORY REPORT

75753-B

Waste Management of North America
11937 Dorsett Road
Maryland Heights, MO. 63043

Report Date: 8/16/93
Sample Received: 8/5/93

Profile No.: 182789
Generator: Cerro Copper
Sample Description: Billet Casting Sludge
Sample No.: 57278

Paint Filter	Pass
Ash Content	41.9%
Odor of sample	None
Open Cup Flash Point	>180°F
Physical Appearance	Black Mud
Reactive Sulfide	<5.0
Total Cyanide	<5.0
Total Phenolics	<10
Total Solids	69.0%
Water Reactivity	No Reaction
pH (10% solution)	8.28 (units)

	Total	TCLP
Arsenic	<0.2	--
Barium	101	1.7
Cadmium	0.77	<0.1
Chromium	4.4	--
Copper	15,000	190
Lead	49	0.58
Mercury	0.04	--
Nickel	<2.5	--
Selenium	4.3	<0.2
Silver	2.6	--
Zinc	170	3.6

All results expressed as ppm unless otherwise indicated.

Methods performed according to SW-846, "Test Methods for Evaluating Solid Waste", ASTM and Waste Management Approved Methods.

Ivana Draiandra
LABORATORY DIRECTOR

ENVIRONMENTAL MONITORING AND TECHNOLOGIES, INC.

8100 North Austin Avenue
Morton Grove, Illinois 60053-3203
708/967-6666
FAX: 708/967-6735

LABORATORY REPORT

75753-A

Waste Management of North America
11937 Dorsett Road
Maryland Heights, MO. 63043

Report Date: 8/13/93
Sample Received: 8/5/93

Profile No.: 182789
Generator: Cerro Copper
Sample Description: Billet Casting Sludge
Sample No.: 57278

Compounds	Concentration Found In Sample	Blank	Adjusted Concentration	Method Detection Limit (MDL)	Regulatory Limit
1. Benzene	<0.25	<0.01	<0.25	0.01	0.50
2. Carbon Tetrachloride	<0.25	<0.01	<0.25	0.01	0.50
3. Chlorobenzene	<50.0	<0.01	<50.0	0.01	100.00
4. Chloroform	<3.0	<0.01	<3.0	0.01	6.00
5. o-Cresol	<100.0	<0.01	<100.0	0.01	200.00
6. m-Cresol	<100.0	<0.01	<100.0	0.01	200.00
7. p-Cresol	<100.0	<0.01	<100.0	0.01	200.00
Total Cresol	<100.0	<0.01	<100.0	0.01	200.00
8. 1,4-Dichlorobenzene	<3.75	<0.01	<3.75	0.01	7.50
9. 1,2-Dichloroethane	<0.25	<0.01	<0.25	0.01	0.50
10. 1,1-Dichloroethene	<0.35	<0.01	<0.35	0.01	0.700
11. 2,4-Dinitrotoluene	<0.07	<0.01	<0.07	0.01	0.13
12. Hexachlorobenzene	<0.07	<0.01	<0.07	0.01	0.13
13. Hexachloro-1,3 -butadiene	<0.25	<0.01	<0.25	0.01	0.50
14. Hexachloroethane	<1.50	<0.01	<1.50	0.01	3.00
15. Methyl Ethyl Ketone	<100.0	<0.01	<100.0	0.01	200.00
16. Nitrobenzene	<1.00	<0.01	<1.00	0.01	2.00
17. Pentachlorophenol	<50.00	<0.01	<50.0	0.01	100.00
18. Pyridine	<2.50	<0.01	<2.50	0.01	5.00
19. Tetrachloroethylene	<0.35	<0.01	<0.35	0.01	0.70
20. Trichloroethylene	<0.25	<0.01	<0.25	0.01	0.50
21. 2,4,5-Trichlorophenol	<200.00	<0.01	<200.00	0.01	400.00
22. 2,4,6-Trichlorophenol	<1.00	<0.01	<1.00	0.01	2.00
23. Vinyl Chloride	<0.10	<0.01	<0.10	0.01	0.20

All results expressed as ppm unless otherwise indicated.
Methods performed according to SW-846, "Test methods for Evaluating Solid Waste".

Analysis performed on Extract from TCLP.

Leah E. Zahn

LABORATORY DIRECTOR

ENVIRONMENTAL MONITORING AND TECHNOLOGIES, INC.

8100 North Austin Avenue
Morton Grove, Illinois 60053-3203
708/967-6565
FAX: 708/967-6795

LABORATORY REPORT

75753-C

Waste Management of North America
11937 Dorsett Road
Maryland Heights, MO. 63043

Report Date: 8/16/93
Sample Received: 8/5/93

Profile No.: 182789
Generator: Cerro Copper
Sample Description: Billet Casting Sludge
Sample No.: 57278

	Concentration Found In Sample (ppb)	Concentration Found In Blank (ppb)	Method Detection Limit (MDL) ug/kg (ppb)	Quantitation Limit ug/kg (ppb)
PCB 1221	<0.08	<0.08	30	150
PCB 1232	<0.08	<0.08	30	150
PCB 1016 (1242)	<0.08	<0.08	30	150
PCB 1248	<0.08	<0.08	30	150
PCB 1254	<0.08	<0.08	30	300
PCB 1260	<0.08	<0.08	30	300
(Total PCB)	<0.08	<0.08	30	

All results expressed as ppb unless otherwise indicated.

Methods performed according to SW-846, "Test Methods for Evaluating Solid Waste".

Luck E. Zahn

LABORATORY DIRECTOR

ENVIRONMENTAL MONITORING AND TECHNOLOGIES, INC.

8100 North Austin Avenue
Morton Grove, Illinois 60053-3203
708/967-6666
FAX: 708/967-6735

LABORATORY REPORT

75753

Waste Management of North America
11937 Dorsett Road
Maryland Heights, MO. 63043

Report Date: 8/9/93
Sample Received: 8/5/93

Profile No.: 182789
Generator: Cerro Copper
Sample Description: Billet Casting Sludge

SOLVENTS UNDER GENERIC NUMBERS F001 F002 F003 F004 F005

		Sample #57278	Blank	Detection Limit
F001	Tetrachloroethylene	<100	<0.005	0.005
	Trichloroethylene	<100	<0.005	0.005
	Methylene Chloride	<100	<0.005	0.005
	1,1,1 - Trichloroethane	<100	<0.005	0.005
	Carbon Tetrachloride	<100	<0.005	0.005
F002	Tetrachloroethylene	<100	<0.005	0.005
	Methylene Chloride	<100	<0.005	0.005
	Trichloroethylene	<100	<0.005	0.005
	1,1,1 - Trichloroethane	<100	<0.005	0.005
	Chlorobenzene	<100	<0.005	0.005
	1,1,2-Trichloro-1,2,2 - Trifluoroethane	<100	<0.005	0.005
	Ortho - Dichlorobenzene	<100	<0.005	0.005
	Trichlorofluoromethane	<100	<0.005	0.005
	1,1,2 - Trichloroethane	<100	<0.005	0.005
F003	Xylenes	<100	<0.005	0.005
	Acetone	<100	<0.005	0.005
	Ethyl Acetate	<100	<0.005	0.005
	Ethyl Benzene	<100	<0.005	0.005

All results expressed as ppm unless otherwise stated.

Luke E. Zdan

LABORATORY DIRECTOR

ENVIRONMENTAL MONITORING AND TECHNOLOGIES, INC.

6100 North Austin Avenue
Morton Grove, Illinois 60053-3203
708/967-6666
FAX: 708/967-6735

LABORATORY REPORT

75753

Waste Management of North America
11937 Dorsett Road
Maryland Heights, MO. 63043

Report Date: 8/9/93
Sample Received: 8/5/93

Profile No.: 182789
Generator: Cerro Copper
Sample Description: Billet Casting Sludge

SOLVENTS UNDER GENERIC NUMBERS F001 F002 F003 F004 F005

		Sample #57278	Blank	Detection Limit
	Ether	<100	<0.005	0.005
	Methyl Isobutyl Ketone	<100	<0.005	0.005
	n-Butyl Alcohol	<100	<0.005	0.005
	Cyclohexanone	<100	<0.005	0.005
	Methanol	<100	<0.01	0.01
F004	Cresols or Cresylic Acid	<100	<0.005	0.005
	Nitrobenzene	<100	<0.005	0.005
F005	Toluene	<100	<0.005	0.005
	Methyl Ethyl Ketone	<100	<0.005	0.005
	Carbon Disulfide	<100	<0.005	0.005
	Isobutanol	<100	<0.005	0.005
	Pyridine	<100	<0.005	0.005
	2 - Ethoxyethanol	<100	<0.01	0.01
	Benzene	<100	<0.005	0.005
	2 - Nitropropane	<100	<0.005	0.005

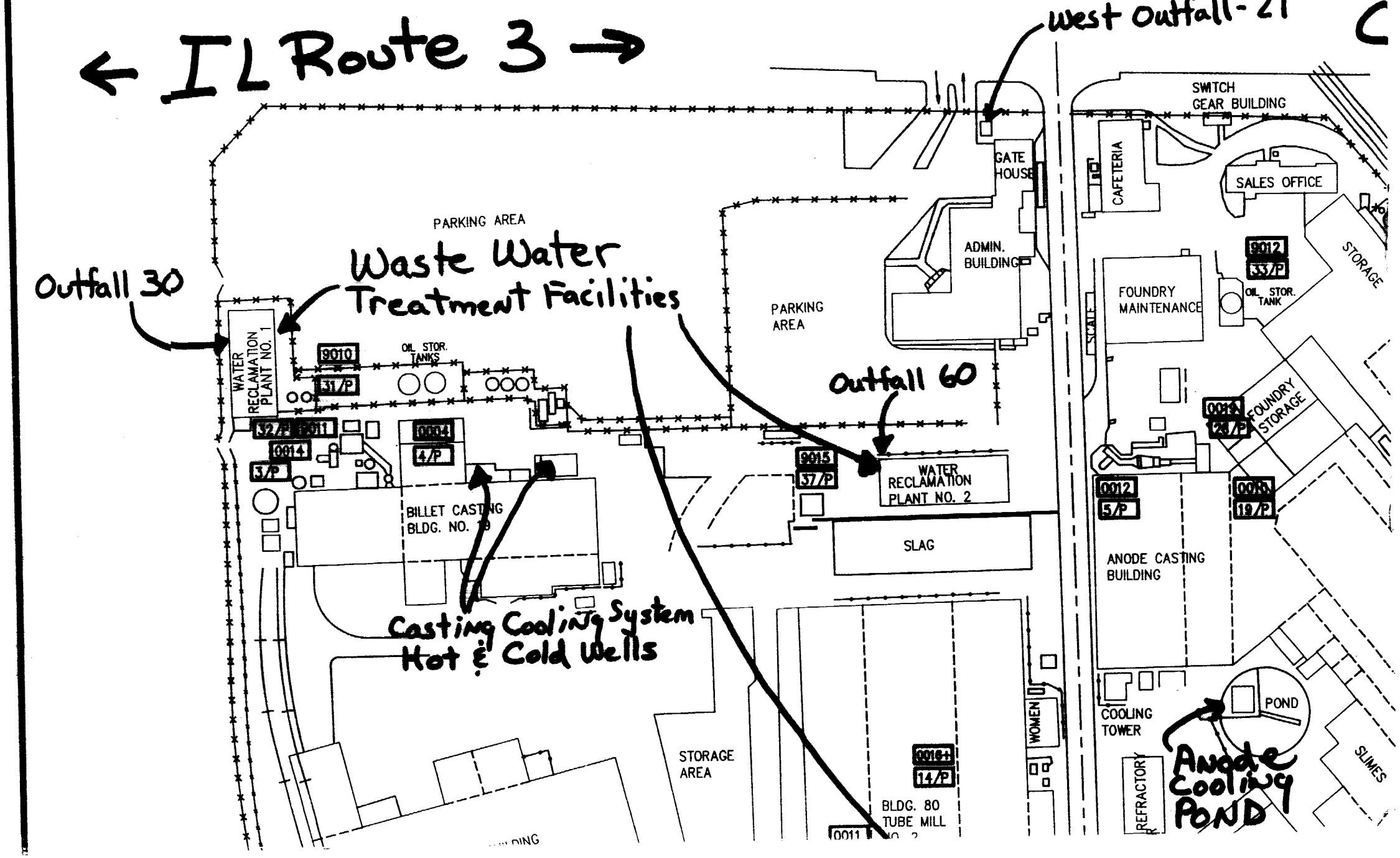
All units expressed as ppm unless otherwise stated.

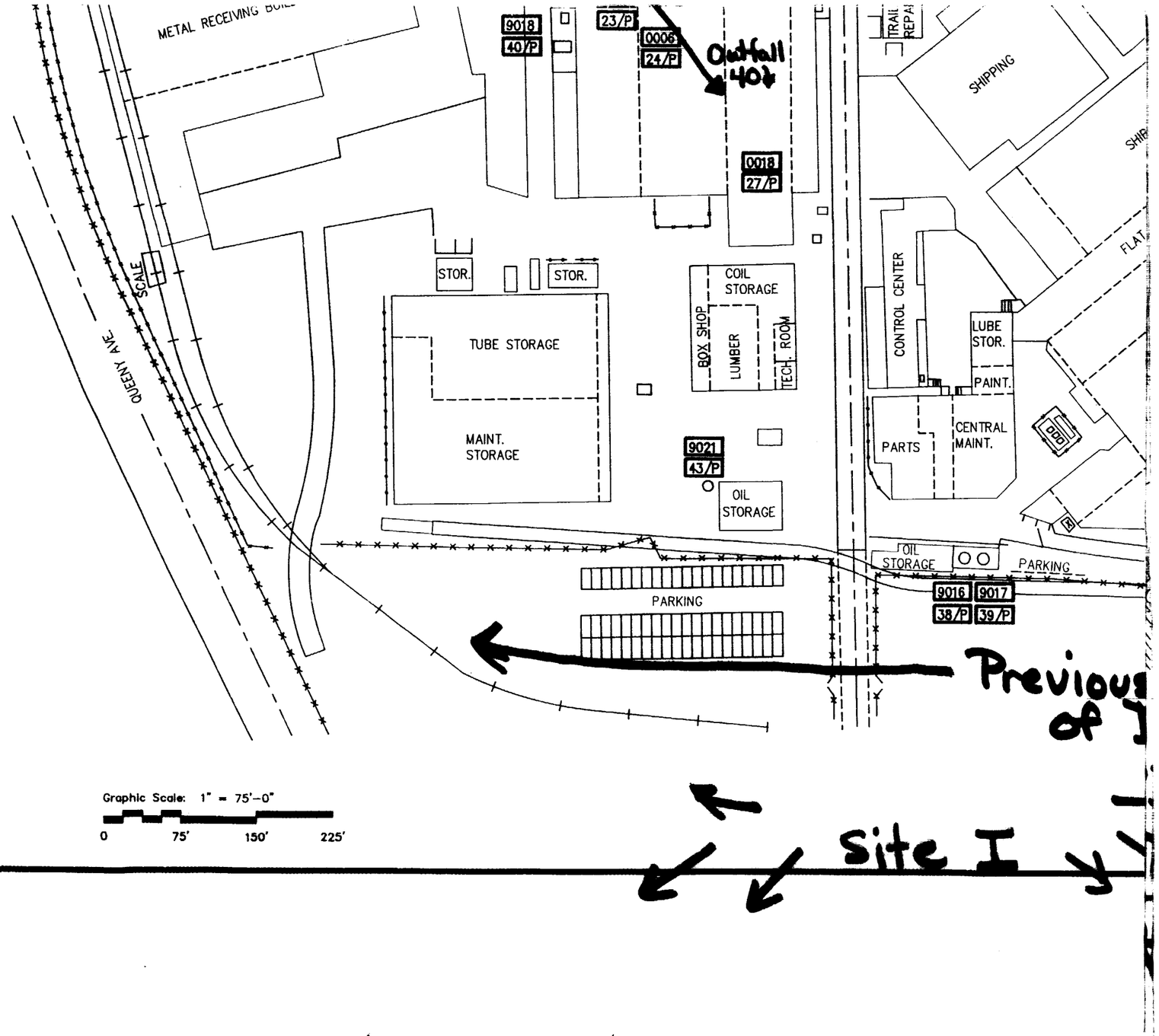
Methods performed according to SW-846 "Test Methods for Evaluating Solid Waste".

Frank E. Zehn
LABORATORY DIRECTOR

Exhibit I

Answer 38 & 39 Exhibit A



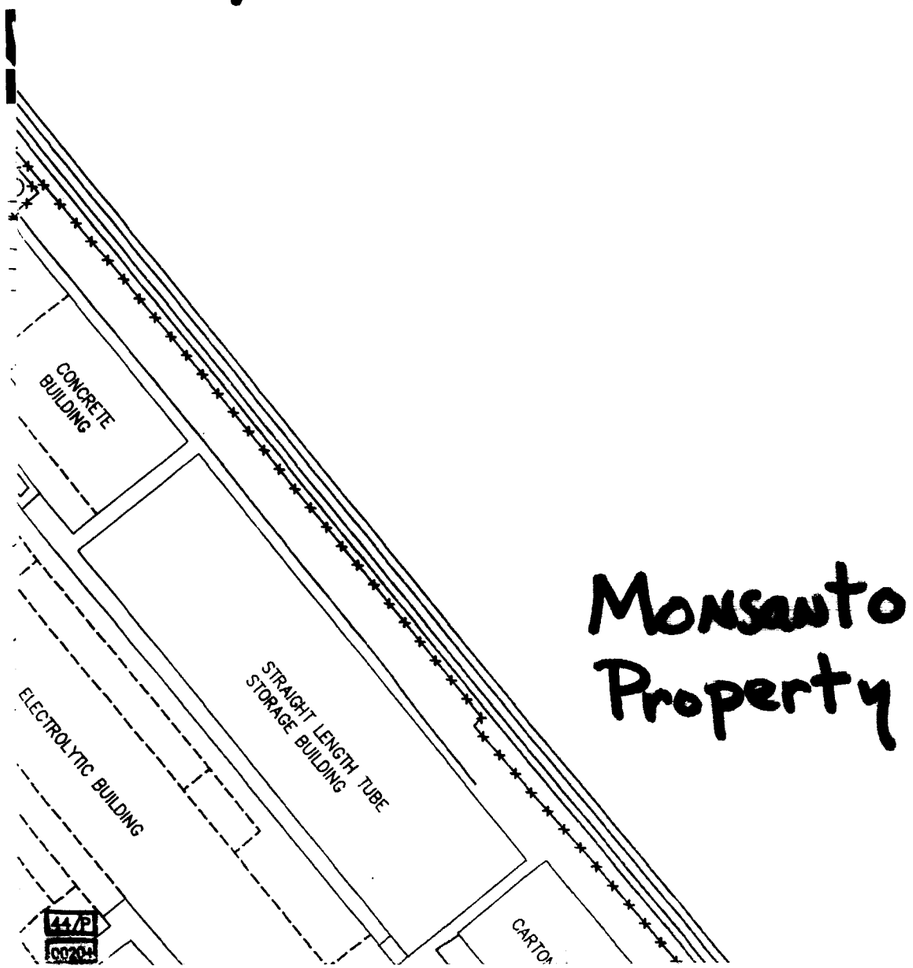


Graphic Scale: 1" = 75'-0"

0 75' 150' 225'

Air Pollution Sources & Wastewater Outfalls

Wastewater Treatment, Oil/Water Separators Casting & Anode Cooling Water Wells & POND.

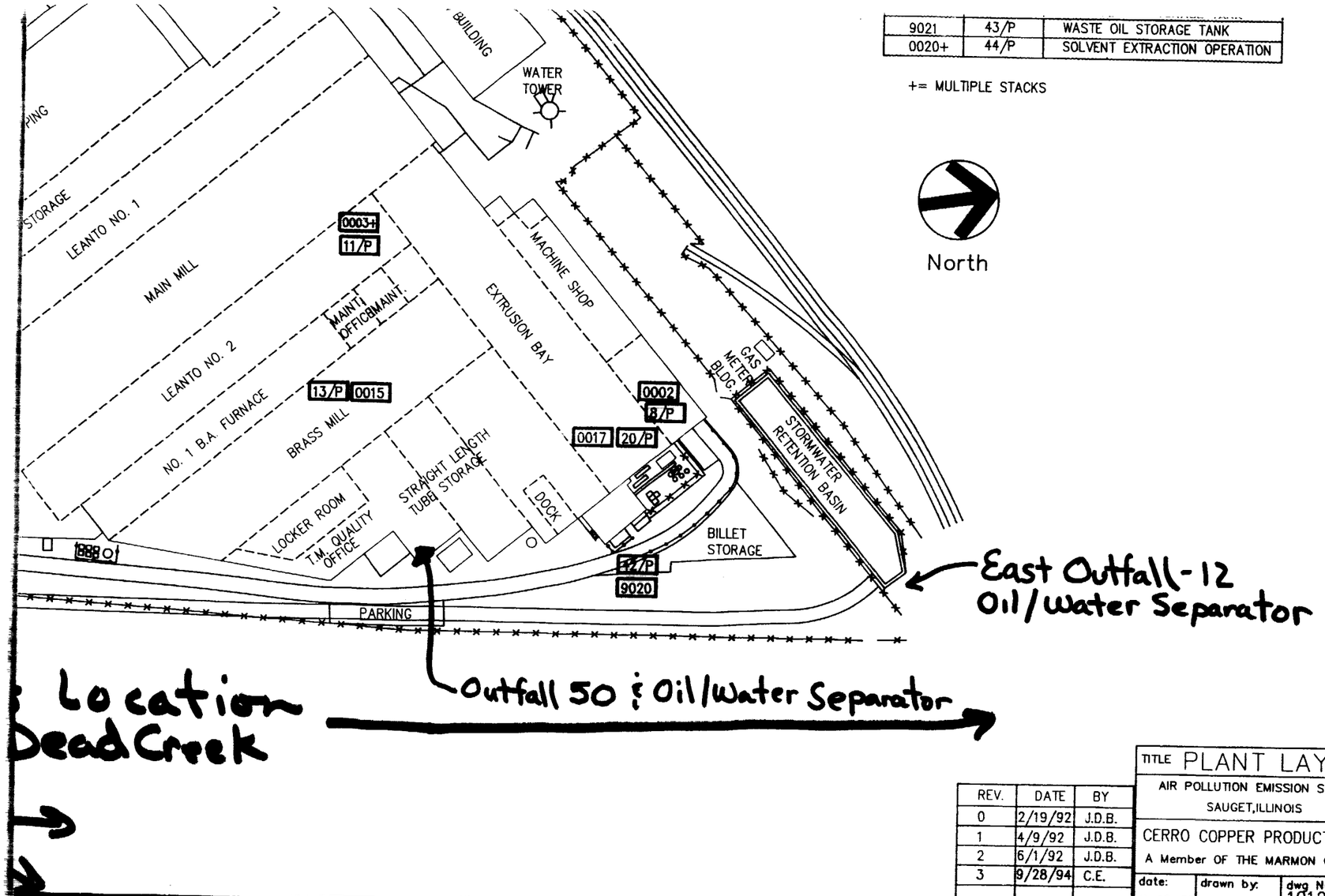


Monsanto Property

Graphic Scale: 1" = 75'-0"

0 75' 150' 225'

EPA STACK NO.	CERRO NO.	EMISSION SOURCE IDENTIFICATION
0014	3/P	BILLET FURNACE NO.6
0004	4/P	SHAFT FURNACE
0012	5/P	ANODE FURNACES NO.S 3&4
0002	8/P	BILLET HEATING FURNACE (GRANCO 1)
0003+	11/P	BATCH ANNEALING FURNACE NO.3
0015	13/P	BATCH ANNEALING FURNACE NO.1
0016+	14/P	BATCH ANNEALING FURNACE NO.6
0010	19/P	PACKAGE BOILER NO.3
0017	20/P	BILLET HEATING FURNACE NO.1
0011	23/P	DEGREASER BOILER
0006	24/P	DRIP TANK DEGREASER
0019	26/P	PACKAGE BOILER NO.4
0018	27/P	PIERCING MILL NO.2 FURNACE
9010	31/P	OIL STORAGE TANK NO.4
9011	32/P	OIL STORAGE TANK NO.5
9012	33/P	OIL STORAGE TANK NO.6
	36/P	(RESERVED)
9015	37/P	GASOLINE DISPENSING TANK
9016	38/P	FR HYDRAULIC OIL STORAGE TANK
9017	39/P	HYDRAULIC OIL STORAGE TANK
0018	40/P	BLDG.80 SOLVENT STORAGE TANK
0020	42/P	SOLUBLE OIL STORAGE TANK



9021	43/P	WASTE OIL STORAGE TANK
0020+	44/P	SOLVENT EXTRACTION OPERATION

+= MULTIPLE STACKS

North

REV.	DATE	BY
0	2/19/92	J.D.B.
1	4/9/92	J.D.B.
2	6/1/92	J.D.B.
3	9/28/94	C.E.

TITLE PLANT LAYOUT

AIR POLLUTION EMISSION SOURCES
SAUGET, ILLINOIS

CERRO COPPER PRODUCTS CO.
A Member OF THE MARMON GROUP

date:	drawn by:	dwg No:
9-16-91		1012-G-59

Exhibit J

Exhibit H

AMERICAN BOTTOMS
REGIONAL WASTEWATER TREATMENT FACILITY
1 AMERICAN BOTTOMS ROAD
SAUGET, ILLINOIS 62201-1075
(618) 337-1710
FAX (618) 337-8919

August 31, 1994

Mr. Joseph M. Grana
Cerro Copper Products
Post Office Box 66800
St. Louis, Missouri 63166-6800

CERTIFIED MAIL
RETURN RECEIPT REQUESTED
P 178 724 779

Dear Mr. Grana:

Herewith is your 1994-96 renewal of your 1992-94 Wastewater Discharge Permit. This permit includes the revised categorical limits at sample points 30, 40 and 50.

The enclosed issued permit No. 94-108 covers the wastewater discharge from the facility located in Sauget, Illinois. All discharges from this facility and related actions and reports shall be in accordance with the terms and conditions of this permit and the Ordinance.

If you wish to appeal any effluent limitations, pretreatment requirements, or other conditions imposed in this wastewater discharge permit, a written notice of appeal should be filed within 30 days after the effective date of the permit. Your written notice of appeal, if filed, should be mailed or delivered to:

Village Clerk
Village of Sauget
2897 Falling Springs Road
Sauget, Illinois 62206

If you have any questions related to this permit, please call.

Sincerely,

Mark A. Montague

Mark A. Montague
Pretreatment Coordinator

Enclosure

VILLAGE OF SAUGET

AMERICAN BOTTOMS REGIONAL WASTEWATER TREATMENT FACILITY

WASTEWATER DISCHARGE PERMIT

for

Cerro Copper Products

PERMIT NO. 94-108

TABLE OF CONTENTS

AMERICAN BOTTOMS
REGIONAL WASTEWATER TREATMENT FACILITY
1 AMERICAN BOTTOMS ROAD
SAUGET, ILLINOIS 62201-1075
(618) 337-1710
FAX (618) 337-8919

September 1, 1994

Cerro Copper Products
Highway 3 and A&S Tracks
Sauget, Illinois 62202

Wastewater Discharge Permit No. 94-108

Dear Sirs:

In accordance with all the terms and conditions of Ordinance 632 of the Village of Sauget; the 1977 Regional Agreement as amended; Section 46 of the Illinois Environmental Protection Act of 1970 (Ill. Rev. Stat. 1987. Ch. 1111/2, Sec. 1046) as amended; and Ill. Rev. Stat. 1987, Ch 24, Sec. 11-141-7; permission is hereby granted to Cerro Copper Products, operating under the Standard Industrial Classification (SIC) Codes No. 3341, No. 3366, and No. 3351, and subject to the National Categorical Pretreatment Standard (NCPS) No. 40 CFR 421.65, 464.25 Subparts B and F, and 468.14, Subparts A, D, K, M, and Q, to discharge industrial wastewater into sewer lines tributary to the American Bottoms Regional Wastewater Treatment Plant in accordance with and subject to the provisions of attached American Bottoms Regional Wastewater Discharge Permit No. 94-108 ("Permit").

This Permit is granted in response to the application filed on February 24, 1994 in the office of the General Manager, #1 American Bottoms Road, Sauget, Illinois 62201, and in conformity with plans, specifications and other data submitted in support of the above application, all of which are filed with and considered as a part of this Permit, together with the attached conditions and requirements.

Nothing herein shall be construed as a permit or as permission for the permittee to violate the provisions of any sewer use ordinance in effect within the jurisdiction of any unit of local government in which the permittee's facility is located.

This Permit will take effect on September 1, 1994, and will expire on October 1, 1996.

VILLAGE OF SAUGET

By: George K. Schilling
General Manager

PART 1 - GENERAL CONDITIONS OF PERMIT

A. General - This Wastewater Discharge Permit shall be expressly subject to all provisions of Ordinance 632 of the Village of Sauget (hereinafter "the Ordinance") and all other applicable regulations, user charges,and fees established by the Village of Sauget. In consideration of the granting of this Permit, the permittee shall comply with all provisions of the Ordinance, Permit conditions, and the Implementation procedures including, but not limited to the specific requirements of these General Condition Articles. Any Permit noncompliance constitutes a violation of the Ordinance, and is grounds for enforcement action.

B. Prohibitive Standards - The permittee shall comply with all prohibitive discharge standards pursuant to Section 3.2 of the Ordinance and all Local, State, and Federal discharge limits set forth in the Permit.

C. Prohibition of Improper Dilution - Improper dilution shall be prohibited pursuant to Section 3.6 of the Ordinance.

D. Duration - This Permit is issued effective September 1, 1994, and shall expire on October 1, 1996.

E. Transfer - Pursuant to Section 4.11 of the Ordinance, this Wastewater Discharge Permit may be reassigned or transferred, in whole or in part, to a new owner and/or operator only if the permittee gives at least thirty (30) days advance notice to the POTW and the POTW approves the Wastewater Discharge Permit transfer. The notice to the POTW must include a written certification by the new owner and/or operator which:

1. States that the new owner and/or operator has no immediate intent to change the facility's operations and processes;

2. Identifies the specific date on which the transfer is to occur; and

3. Acknowledges full responsibility for complying with the Wastewater Discharge Permit.

F. Change in Conditions - Pursuant to Section 4.7 of the Ordinance, in the event the type, quality, character or volume of Pollutants in a Discharge, including the listed or characteristic hazardous wastes for which the permittee has

submitted initial notification under Section 4.13.5 of the Ordinance, is expected to substantially change as reasonably determined by the permittee or POTW, the permittee or his assignee (see paragraph E. above) shall give sixty (60) days advance notice in writing to the POTW and shall make a new application to the POTW and the Sewer System Owner prior to said change. No permittee shall substantially change the type, quality, character or volume of its Wastewater beyond that allowed by this Permit without prior approval of the Sewer System Owner and the POTW.

G. Access - Pursuant to Section 4.15 of the Ordinance, persons or occupants of premises in which a Discharge source or treatment system is located or in which records are kept shall allow the POTW or its representative ready access upon presentation of credentials at reasonable times to all parts of said premises for the purposes of inspection, sampling, examination and photocopying of records required to be kept by the Ordinance and this Permit, and in the performance of any of their duties. The POTW shall have the right to set up on the permittee's property such devices as are necessary to conduct sampling, monitoring and metering operations.

H. Retention of Records - Pursuant to Section 4.15 of the Ordinance, the permittee shall maintain records of all information resulting from any monitoring activities required by this Ordinance and shall include:

1. The date, exact place, method and time of sampling and the names of the Person or Persons taking the samples;

2. The dates analyses were performed;

3. Who performed the analyses;

4. The analytical techniques/methods used; and

5. The results of such analyses.

The permittee shall maintain for inspection by the POTW, IEPA or USEPA such records for a minimum of three (3) years. This period of retention shall be extended during the course of any unresolved litigation regarding the Discharge of Pollutants by the permittee or operation of the POTW Pretreatment program or when requested by the Regional Administrator of USEPA or the Director of IEPA.

I. Analytical Methods - All measurements, sampling, tests, and analyses to which reference is made in this Permit shall be determined and performed in accordance with the procedures established by the Administrator of the United States Environmental Protection Agency (hereafter "Administrator") pursuant to Section 304(g) of the Act and contained in 40 CFR Part 136 and amendments thereto or with any other test procedures approved by the Administrator. Sampling shall be performed in accordance with the techniques approved by the Administrator. Where 40 CFR Part 136 does not include sampling or analytical techniques for the Pollutants in question, or where the Administrator determines that the Part 136 sampling and analytical techniques are inappropriate for the Pollutant in question, sampling and analyses shall be performed using validated analytical methods or any other sampling and analytical procedures, including procedures suggested by the POTW or other parties, approved by the Administrator.

J. Pretreatment Facilities - The permittee shall provide necessary Wastewater Pretreatment as required to comply with the Ordinance and shall achieve compliance with all applicable Pretreatment Requirements and Standards within the time limitations as specified by appropriate statutes, regulations, and the Ordinance. Any facilities required to pretreat Wastewater to a level acceptable to the POTW shall be provided, properly operated and maintained at the permittee's expense. Such Pretreatment facilities shall be under the control and direction of an IEPA certified Wastewater Treatment Operator.

K. Spill Containment - Pursuant to Section 3.7 of the Ordinance, any permittee having the ability to cause Interference or Pass-Through of the POTW or to violate the regulatory provisions of the Ordinance shall provide protection from Accidental or Slug Discharges to the POTW of prohibited materials or other substances regulated by the Ordinance. Any facilities required to prevent Accidental or Slug Discharge of prohibited materials shall be provided and maintained at the permittee's own cost and expense.

L. Permit Modifications - The terms and conditions of this Permit may be modified by the POTW during the term of the Permit for good cause including, but not limited to, the following: to incorporate any new or revised Federal, State, or local Pretreatment Standards or Requirements; to address significant alterations or additions to the permittee's operation, processes, or Wastewater volume or charac-

ter since the time of Wastewater Discharge Permit issuance; a change in the POTW that requires either a temporary or permanent reduction or elimination of the authorized Discharge; misrepresentation or failure to fully disclose all relevant facts in the Wastewater Discharge Permit application or in any required reporting; revision of or a grant of variance from Categorical Pretreatment Standards pursuant to 40 CFR 403.13; to correct typographical errors in the Wastewater Discharge Permit; or to reflect a transfer of the facility ownership and/or operation to a new owner/operator (as provided in paragraph E. above). The permittee shall be informed of any proposed changes in its Permit at least 30 days prior to the effective date of any modification.

M. Civil and Criminal Penalties - Pursuant to Part 6 of the Ordinance, any permittee who is found to have violated an Order of the POTW or who has failed to comply with any provision of the Ordinance, and the orders, rules, and regulations and Wastewater Discharge Permits issued thereunder, may be fined by appropriate suit at law in an amount not less than one hundred dollars ($100) nor more than one thousand dollars ($1000) per day for each violation. In addition to the penalties provided herein, the POTW may recover reasonable attorney's fees, court costs, court reporter fees and other expenses of litigation by appropriate suit at law against the Person found to have violated this Ordinance or the orders, rules, regulations and Permits issued thereunder.

Any Person who knowingly makes any false statements, representation or certification in any application, record, report, plan or other document filed or required to be maintained pursuant to the Ordinance or Wastewater Discharge Permit, or who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required under the Ordinance, shall in addition be guilty of a misdemeanor and upon conviction, be punished by a fine of $500 to $1,000, for each offense.

N. Additional Information - The permittee shall furnish any additional information as may be reasonably requested by the Village of Sauget from time to time.

O. Upset - Pursuant to Section 3.8 of the Ordinance, the permittee shall have an affirmative defense to an action brought for noncompliance with National Categorical Pretreatment Standards provided that the conditions of Section 3.8.3 of the Ordinance are met. In any enforcement proceed-

ing, the permittee seeking to establish the occurrence of an Upset shall have the burden of proof.

P. Bypass - Bypass provisions pursuant to Section 3.9 of the Ordinance are applicable to this Permit and are hereby incorporated by reference.

Q. Resampling - Pursuant to Section 4.13.3.7 of the Ordinance, if sampling performed by the permittee indicates a violation, the permittee shall notify the POTW within 24 hours of becoming aware of the violation. The permittee shall also repeat the sampling and analysis and submit the results of the repeat analysis to the POTW within 30 days after becoming aware of the violation, except the permittee is not required to resample if:

1. The POTW performs sampling at the permittee at a frequency of at least once per month, or

2. The POTW performs sampling at the permittee between the time when the permittee performs its initial sampling and the time when the permittee receives the results of this sampling.

Resampling is only required for those parameters for which the violation has been identified.

R. Notifications - The following verbal and written notifications are required:

1. Pursuant to Section 4.13.3.7 of the Ordinance, if sampling performed by the permittee indicates a violation of any requirements of the Ordinance or this Permit, the permittee shall notify the POTW within 24 hours of becoming aware of the violation. Such notification may be made orally by telephone.

2. Pursuant to Section 3.7.4 of the Ordinance, in the case of an Accidental or Slug Discharge of Pollutants which may cause Interference at the POTW or may Pass Through the POTW or violate any other requirements of the Ordinance or this Permit, it shall be the responsibility of the permittee to immediately telephone and notify the POTW and the Sewer System Owner of the incident. The notification shall include name of caller, location and time of Discharge, type of Wastewater, estimated concentration and volume. For permittees discharging to the P-Chem Plant, notice to the POTW only is required.

3. Within five days following an Accidental Discharge, the permittee shall submit to the POTW and the Sewer System Owner a detailed written report describing the cause of the Accidental Discharge and the measures to be taken by the permittee to prevent similar future occurrences.

4. A permittee wishing to establish the affirmative defense of Upset for noncompliance with National Categorical Pretreatment Standards shall, in addition to the 24-hour verbal notification required in 1. above, and under Section 3.8.3.3 of the Ordinance, provide a written submission containing the information required by Section 3.8.3.3 of the Ordinance within five days of becoming aware of the Upset.

5. Pursuant to Section 3.9.2.1 of the Ordinance, if the permittee knows in advance of the need for a Bypass, it shall submit prior written notice to the POTW, if possible at least ten days before the date of the Bypass.

6. Pursuant to Section 3.9.2.2 of the Ordinance, the permittee shall submit oral notice of an unanticipated Bypass that exceeds applicable Pretreatment Standards or Requirements to the POTW within 24 hours from the time the permittee becomes aware of the Bypass. A written submission meeting the requirements of Section 3.9.2.2 of the Ordinance shall also be provided to the POTW within 5 days of the time the permittee becomes aware of the Bypass.

7. Pursuant to Section 4.13.5.3 of the Ordinance, in the case of any new regulations under Section 3001 of RCRA identifying additional characteristics of hazardous waste or listing any additional substance as a hazardous waste, the permittee must notify the POTW, the EPA Regional Waste Management Division Director, and the State hazardous waste authorities of the Discharge of such substance within 90 days of the effective date of such regulations.

S. Report Submittal - All reports and/or notifications required by this Permit shall be submitted to:

American Bottoms Regional Wastewater Treatment Facility
#1 American Bottoms Road
Sauget, Illinois 62201
Attn: Pretreatment Coordinator

Telephone: (618) 337-1710
Facsimile: (618) 337-8919

T. Revocation of Permit Pursuant to Section 5.3 of the Ordinance, this Permit may be revoked by the POTW for violations as identified in Section 5.3.1 of the Ordinance, and in accordance with the procedures set forth in Section 5.3.2 of the Ordinance.

U. Rate Ordinance: The Significant Industrial User to which this permit is issued is subject to the following Rate Ordinance(s) of the Village of Sauget:

1. Ordinance No. 536, as amended, which establishes user charges for the American Bottoms Regional Wastewater Treatment Facility.

2. Ordinance No. 596, as amended, which regulates the disposal of sewage, industrial wastes and other wastewater into and the use of the public sewage system served by the American Bottoms Regional Wastewater Treatment Facility.

3. Ordinance No. 380, as amended, which establishes user charges for the Village of Sauget Physical-Chemical Wastewater Treatment Plant.

PART 2 - GENERAL AND SPECIFIC REPORTING REQUIREMENTS

A. General - The General Pretreatment Regulations of 40 CFR 403.12 and Ordinance 632 have set forth basic reporting requirements that apply to the permittee.

B. Specific - The specific reporting requirements of this Permit include the following reporting requirements:

1. Monitoring Reports - Monitoring results obtained shall be summarized and reported on a monthly basis. The report is due on or before 45 days after the end of the month in which the sampling was performed. The report shall indicate the nature and concentration of all pollutants in the wastewater discharges which are regulated by the standards set forth in this Permit and include measured maximum and average daily flows. These reports will satisfy the requirement for the Periodic Compliance Report, provided they contain all the information and certifications required pursuant to Section 4.13.3 of the Ordinance.

PART 3 - GENERAL SAMPLING AND TESTING REQUIREMENTS

A. The permittee is responsible for compliance sampling. The monitoring facilities designated by this Permit are shown on Figure 1.

B. Compliance monitoring results and frequencies may be reviewed annually by the Village of Sauget and appropriate adjustments made to frequencies and parameters in a modified or revised Wastewater Discharge Permit.

C. All handling and preservation of collected samples and laboratory analyses shall be performed in accordance with procedures contained in 40 CFR Part 136 and amendments thereto unless specified otherwise in the monitoring conditions of this Permit. Composite sampling, where called for, shall be performed over a twenty-four (24) hour period by flow or time proportionate methods.

The test procedures for all samples shall conform to one of the USEPA approved test methods which provides the most sensitive detection limits for the pollutant under investigation listed in the current issue of the Code of Federal Regulations, and the most recent addendum published by the Federal Register. The testing for priority organic pollutants shall be conducted utilizing gas chromatograph/mass spectrometer (GC/MS) methods and procedures. Other test procedures may be approved by the USEPA, pursuant to Section 4.15.2 of the Ordinance.

D. The appropriate flow measurement devices and methods consistent with approved scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated and maintained to ensure that the accuracy of the measurements are consistent with the accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than 10% from true discharge rates throughout the range of expected discharge volumes.

E. For each measurement or sample taken pursuant to the requirements of this Permit, the permittee shall maintain and submit records which include:

1. The date, exact place, method and time of sampling;
2. The names of the person or persons taking the samples;
3. The dates analyses were performed;

4. Who performed the analyses;
5. The analytical techniques/methods used;
6. The results of such analyses; and
7. The total flow during the sampling period.

F. In the event of a sampling failure, including, but not limited to, failure of sampling equipment, or sample damage, contamination, or breakage, sampling shall be repeated as soon as possible at all applicable required monitoring locations for those parameters for which the analysis of the original sample(s) was intended.

G. The 30 day resampling requirement of Part 1.Q. of this Permit shall apply to all monitoring locations identified in this Permit. Only those parameters for which the violation has been identified are required to be analyzed as part of the resampling.

H. Where agreed upon in advance by both parties, the POTW may perform monitoring and testing for a parameter(s) regulated by this permit and such POTW monitoring shall satisfy the self-monitoring requirement for the subject parameter(s).

PART 4 - EFFLUENT LIMITATIONS, SAMPLING AND TESTING REQUIREMENTS

A. Local Limits: The Village of Sauget reserves the right, in Ordinance 632, to establish limitations or requirements on discharges to the wastewater disposal system if deemed necessary to comply with the objectives presented in Section 1.4 of the Ordinance.

Parameter	Limitations
Ammonia nitrogen	50 mg/l (24-hour composite) 75 mg/l (grab)

B. State Limits: These limits are stated in 35 Ill. Adm. Code Part 307. This Part 307 places restrictions on the types, concentrations, and quantities of contaminants which can be discharged into sewer systems in the State.

Limitations:

Parameters	Monthly Average (mg/l)	Daily Composite (mg/l)	Grab sample (mg/l)
Mercury	0.003	0.006	0.015
Cyanide (Total)	--	--	10.0

Any sample tested shall not release more than 2 mg/l of cyanide when tested at a pH of 4.5 and at a temperature of 66°C (150°F) for a period of 30 minutes.

The mercury limitation shown is the alternate limitation based on 35 Illinois Adm. Code 307.1102(c). Subject to the averaging rule of Ill Adm. Code 304.104, the monthly average shall be the numerical average of all daily composites taken during a calendar month. A monthly average must be based on at least three daily composites.

C. National Categorical Pretreatment Standards (NCPS): Cerro Copper Products operations are subject to 40 CFR 421.65, 464.25 Subparts B and F, and 468.14, Subparts A, D, K, M, and Q, which have final compliance dates for Pretreatment Standards for Existing Sources (PSES) as follows:

Copper Forming: August 15, 1986
Secondary Copper: March 9, 1987
Metal Molding & Casting - Copper Casting: October 31, 1988

Sources must comply with 40 CFR Part 403 and achieve discharges not exceeding the mass listed in the regulation. Compliance with the monthly average limits are required regardless of the number of samples analyzed and averaged. The limits are identified as follows:

NCPS	Parameter	1-Day Max	Max. Monthly Average
421.65	--	--	--

No discharge of process wastewater pollutants

NCPS	Parameter	1-Day Max	Max. Monthly Average
464.25 B	Copper (T)	0.928	0.506
	Lead (T)	0.639	0.314
	Zinc (T)	0.916	0.350

Units are lb. per 10^6 lb. of metal poured.

NCPS	Parameter	1-Day Max	Max. Monthly Average
464.25 F	Copper (T)	1.81	0.988
	Lead (T)	1.25	0.612
	Zinc (T)	1.79	0.673
	Total Phenols	2.02	0.706
	TTO	5.41	1.77
	Oil & Grease	70.6	23.5

Units are pounds per billion SCF of air scrubbed.

As an alternative to monitoring for TTO, Cerro may elect to monitor for Oil & Grease. Complying with the Oil & Grease limit shall be the equivalent of complying with the TTO limit.

NCPS	Parameter	1-Day Max	Max. Monthly Average
468.14 A	Cr	0.045	0.018
	Cu	0.195	0.103
	Pb	0.015	0.013
	Ni	0.197	0.130
	Zn	0.150	0.062
	TTO	0.066	0.035
	Oil & Grease	2.060	1.236

Units are mg/off-kg (pounds per 10^6 off-pounds) of copper or copper alloy hot-rolled.

As an alternative to monitoring for TTO, Cerro may elect to monitor for Oil & Grease. Complying with the Oil & Grease limit shall be the equivalent of complying with the TTO limit.

Compliance with the monthly discharge limit is required regardless of the number of samples analyzed and averaged.

NCPS	Parameter	1-Day Max	Max. Monthly Average
468.14 D	Cr	0.284	0.116
	Cu	1.227	0.646
	Pb	0.096	0.083
	Ni	1.240	0.820
	Zn	0.943	0.394
	TTO	0.419	0.219
	Oil & Grease	12.920	7.752

Units are mg/off-kg (pounds per 10^6 off-pounds) of copper or copper alloy heat-treated.

As an alternative to monitoring for TTO, Cerro may elect to monitor for Oil & Grease. Complying with the Oil & Grease limit shall be the equivalent of complying with the TTO limit.

Compliance with the monthly discharge limit is required regardless of the number of samples analyzed and averaged.

NCPS	Parameter	1-Day Max	Max. Monthly Average
468.14 K	Cr	0.574	0.235
	Cu	2.481	1.306
	Pb	0.195	0.169
	Ni	2.507	1.658
	Zn	1.906	0.796
	TTO	0.848	0.444
	Oil & Grease	26.120	15.672

Units are mg/off-kg (pounds per 10^6 off-pounds) of copper or copper alloy pickled.

As an alternative to monitoring for TTO, Cerro may elect to monitor for Oil & Grease. Complying with the Oil & Grease limit shall be the equivalent of complying with the TTO limit.

Compliance with the monthly discharge limit is required regardless of the number of samples analyzed and averaged.

NCPS	Parameter	1-Day Max	Max. Monthly Average
468.14 M	Cr	0.051	0.020
	Cu	0.220	0.116
	Pb	0.017	0.015
	Ni	0.222	0.147
	Zn	0.169	0.070
	TTO	0.075	0.039
	Oil & Grease	2.320	1.392

Units are mg/off-kg (pounds per 10^6 off-pounds) of copper or copper alloy pickled.

Compliance with the monthly discharge limit is required regardless of the number of samples analyzed and averaged.

As an alternative to monitoring for TTO, Cerro may elect to monitor for Oil & Grease. Complying with the Oil & Grease limit shall be the equivalent of complying with the TTO limit.

NCPS	Parameter	1-Day Max	Max. Monthly Average
468.14 Q	Cr	0.009	0.003
	Cu	0.041	0.021
	Pb	0.003	0.002
	Ni	0.041	0.027
	Zn	0.031	0.013
	TTO	0.014	0.007
	Oil & Grease	0.436	0.261

Units are mg/off-kg (pounds per 10^6 off-pounds) of copper or copper alloy formed.

As an alternative to monitoring for TTO, Cerro may elect to monitor for Oil & Grease. Complying with the Oil & Grease limit shall be the equivalent of complying with the TTO limit.

D. Monitoring Schedule

1. The monitoring schedule requirements are required as of the effective date of this Permit.

2. Monitoring locations are indicated in the attached diagram - Figure 1.

3. State and Local Limitations at East Outfall (EOF) and West Outfall (WOF):

Parameters	Monthly Average (mg/l)	Daily Composite (mg/l)	Grab sample (mg/l)
Mercury	0.003	0.006	0.015
Cyanide (Total)	--	--	10.0
Ammonia-Nitrogen	--	50	75

4. Compliance with the ammonia nitrogen local limit will be determined by sampling and testing performed by the POTW. Permittee self-monitoring for ammonia is not required.

5. Copper Forming Limits for Main Tube Mill (Sampling Location 50):

Pollutant	Daily Maximum Limit lbs/day	Monthly Average Limit lbs/day
Copper	1.261	0.663
Chromium	0.291	0.118
Lead	0.098	0.085
Nickel	1.274	0.842
Zinc	0.969	0.405
Total Toxic Organics	0.431	0.225
Oil and Grease	13.280	7.967

Compliance with the above limits will be determined by measurement of pollutant discharge at Sampling Location 50.

6. Copper Forming Limits for the Piercing Mill, Building 80 (Sampling Location 40):

Pollutant	Daily Maximum Limit lbs/day	Monthly Average Limit lbs/day
Copper	0.264	0.139
Chromium	0.061	0.025
Lead	0.021	0.018
Nickel	0.267	0.176
Zinc	0.203	0.085
Total Toxic Organics	0.090	0.047
Oil and Grease	2.779	1.667

Compliance with the above limits will be determined by measurements of pollutant discharge at Sampling Location 40.

7. Secondary Copper Limits (Sampling Location 60):

Cerro shall not discharge any process wastewater pollutants from any operations subject to 40 C.F.R. Part 421 and shall comply by recycling and reusing all wastewater flows that are subject to 40 C.F.R. Part 421, except such wastewater may be transferred to the Metal Molding and Casting ("MMC") portion of the facility in accordance with the paragraphs below.

Cerro may transfer process wastewater containing pollutants from the anode furnace air pollution control scrubber to the MMC portion of the facility only if all of the following conditions are met:

a. Cerro shall not transfer more than a monthly average of 10,000 gallons per day of anode furnace air pollution control scrubber wastewater for use as make-up water in the MMC portion of the Cerro facility. Cerro shall manage all wastewater transferred from the anode furnace air pollution control scrubber as wastewater regulated by the National Categorical Pretreatment Standard which applies to the MMC portion of the facility.

b. Cerro shall not transfer any anode furnace air pollution control scrubber wastewater to the MMC portion of the facility unless it complies with the following limits:

Pollutant	Limit (monthly average)[1]
Copper	2 mg/l
Cadmium	2 mg/l
Lead	2 mg/l
Zinc	6 mg/l

c. Cerro shall reuse (e.g., through sale to a reclaimer) or recycle, on or off-site, all solid residuals or sludge generated from the MMC wastewater treatment portion of the facility, but in no event shall Cerro land dispose any such solid residuals or sludge generated from the MMC portion of the facility.

Compliance with this limit will be determined by measurement of pollutant discharge at Sampling Location 60.

8. Metal Molding and Casting Limits for Building 19 WWTF (Sampling Location 30):

Pollutant	Daily Maximum Limit lbs/day	Monthly Average Limit lbs/day
Copper	1.093	0.596
Lead	0.753	0.370
Zinc	1.079	0.412
Total Toxic Organics	0.099	0.032
Oil and Grease	1.291	0.430
Phenols (4AAP)	0.037	0.013

If Cerro discharges batches of wastewater which represent more than one day of operation, then the applicable limit for such discharge shall be multiplied by the number of days (calculated per quarter day) of production which generated the wastewater. Regardless of the number of days of production, Cerro must comply with the monthly average limitations set forth above without any adjustment.

Compliance with the above limits will be determined by measurement of pollutant discharges at Sampling Location 30.

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[1] For purposes of this permit, "monthly average" is defined as the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

9. Monitoring Frequencies:

Cerro shall perform the monitoring, sampling analysis and reporting required by 40 C.F.R. 403.12(e) at the location, frequency and methods described in the table below and samples shall be representative of daily operations.

Parameter (Units)	Sample Type[a]	Location[b]/frequency					
		WOF	EOF	30	40	50	60
Flow (gal.)	Meter	D	D	D	D	D	D
Copper (mg/l)	Comp.						Q
Cadmium (mg/l)	Comp.						Q
Lead (mg/l)	Comp.						Q
Zinc (mg/l)	Comp.						Q
Copper (lb/d)	Comp.			Q	Q	Q	
Chromium (lb/d)	Comp.			Q	Q	Q	
Lead (lb/d)	Comp.			Q	Q	Q	
Nickel (lb/d)	Comp.			Q	Q	Q	
Zinc (lb/d)	Comp.			Q	Q	Q	
TTO-VOA (lb/d)	Grab			SA	SA	SA	
TTO-BNA (lb/d)	Comp.			SA	SA	SA	
Oil & Grease[c](lb/d)	Grab			SA	SA	SA	
Phenols (lb/d)	Grab			Q			
Mercury (mg/l)	Comp.	M	M				
Cyanide (mg/l)	Grab	M	M				

D: Daily flow recording based on totalized flow measurements.
M: Monthly Samples
Q: Quarterly Samples
SA: Semi-Annual Samples

Notes:

[a] (1) Composite sample is a 24-hour flow proportional composite sample as defined in 40 C.F.R. 403 Appendix E (I).
(2) Grab Sample is an individual sample collected over a period of time not to exceeding 15 minutes and a minimum of 4 grab samples per parameter to characterize a parameter over a 24 hour sampling period. The method is described in 40 C.F.R. 403 Appendix E (II).

[b] WOF - West Outfall
EOF - East Outfall
Location 30 - Metal Molding & Casting (Bldg. 19 WWTF)
Location 40 - Copper Forming (Piercing Mill)
Location 50 - Main Tube Mill
Location 60 - Anode Scrubber Transfer

[c] As an alternative to monitoring for TTO, Cerro may elect to monitor for Oil & Grease. Complying with the Oil & Grease limit shall be considered the equivalent of complying with the TTO limit. If TTO is monitored, Oil & Grease monitoring is not required.

PART 5 - COMPLIANCE SCHEDULE

A. General:

Authority Citation: Section 4.13 Village of Sauget Pretreatment Ordinance No. 632.

Permit No. 94-108

Industry Name: Cerro Copper Products

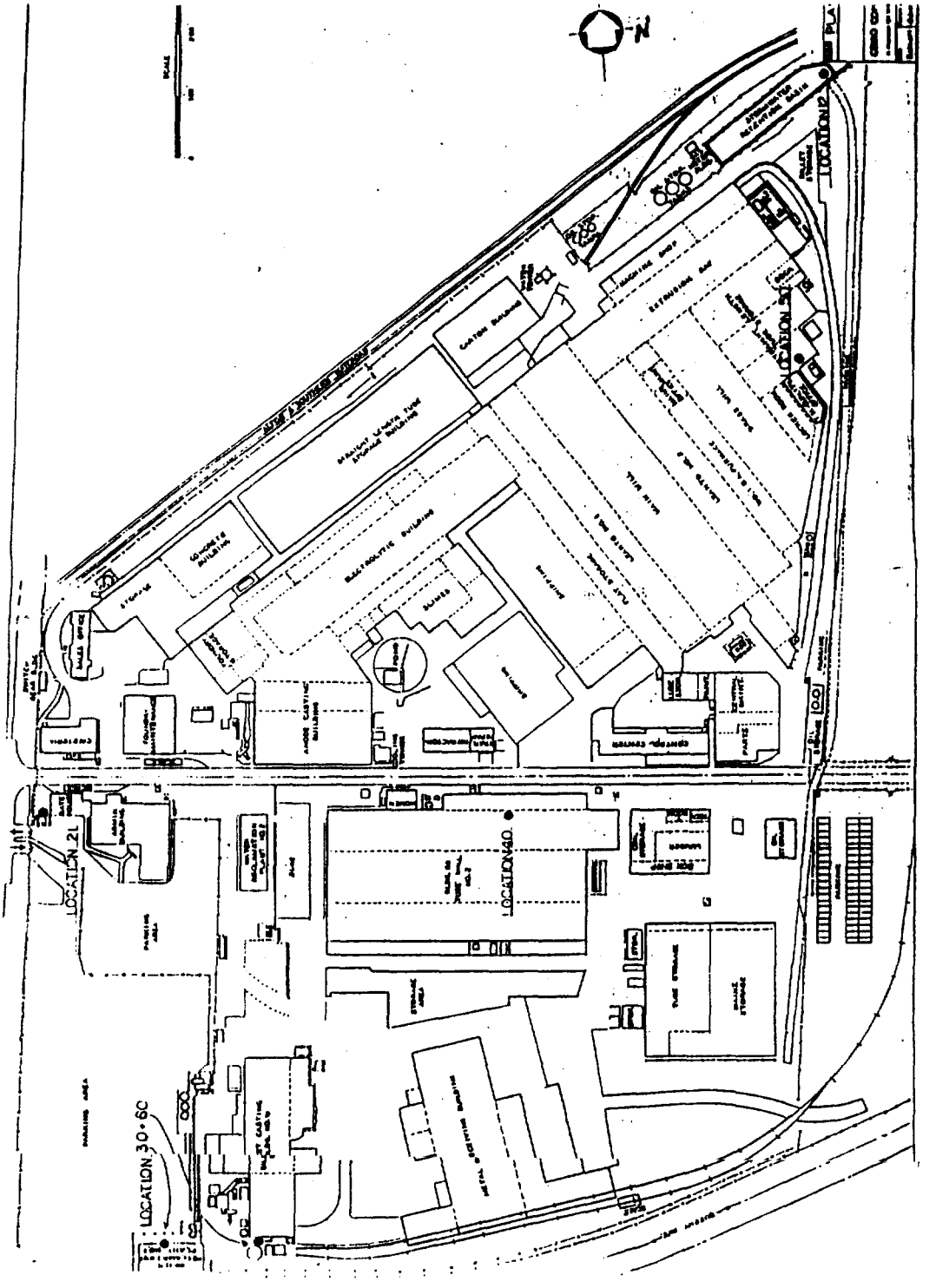
B. Final Compliance Date:

Copper Forming: August 15, 1986
Secondary Copper: March 9, 1987
Metal Molding & Casting - Copper Casting: October 31, 1988

PART 6 - SPECIAL CONDITIONS

The permittee shall notify the POTW prior to resuming discharge at sample point 40.

FIGURE 1 - MONITORING LOCATION



CC: REC
JWS
TC
JMG

AMERICAN BOTTOMS
REGIONAL WASTEWATER TREATMENT FACILITY
1 AMERICAN BOTTOMS ROAD
SAUGET, ILLINOIS 62201
(618) 337-1710
FAX (618) 337-8919

CERTIFIED MAIL
RETURN RECEIPT REQUESTED
P 028 966 786

November 2, 1992

Mr. Paul Tandler
Cerro Copper Products
Post Office Box 66800
St. Louis, MO 63166-6800

Dear Mr. Tandler:

Herewith is the revised 1992-94 renewal of your 1991-92 Wastewater Discharge Permit. This revision incorporates the requested reduction in monitoring frequency for categorical metals for site 60 which represents the Anode Casting & Electrolytic Refinery and Ancde Furnace Air Pollution Control portion of Cerro's Facility. In addition, Part 6 - Consent Decree has been removed from the Permit since Cerro has satisfied all parts of the subject Consent Decree.

The enclosed issued permit No. 92-108 covers the wastewater discharge from the facility located in Sauget, Illinois. All discharges from this facility and related actions and reports shall be in accordance with the terms and conditions of this permit and the Ordinance.

If you wish to appeal any effluent limitations, pretreatment requirements, or conditions imposed in this wastewater discharge permit, a written notice of appeal should be filed within 30 days after the effective date of the permit. Your written notice of appeal, if filed, should be mailed or delivered to:

Village Clerk
Village of Sauget
2897 Falling Springs Road
Sauget, Illinois 62206

If you have any questions related to this permit, please call.

Sincerely,

Kimberly D. Dominic

Kimberly D. Dominic, P.E.
Pretreatment Coordinator

Enclosures

AMERICAN BOTTOMS
REGIONAL WASTEWATER TREATMENT FACILITY
1 AMERICAN BOTTOMS ROAD
SAUGET, ILLINOIS 62201
(618) 337-1710
FAX (618) 337-8919

VILLAGE OF SAUGET

AMERICAN BOTTOMS REGIONAL WASTEWATER TREATMENT FACILITY

WASTEWATER DISCHARGE PERMIT

for

Cerro Copper Products

PERMIT NO. 92-108

TABLE OF CONTENTS

AMERICAN BOTTOMS
REGIONAL WASTEWATER TREATMENT FACILITY
1 AMERICAN BOTTOMS ROAD
SAUGET, ILLINOIS 62201
(618) 337-1710
FAX (618) 337-8919

November 2, 1992

Cerro Copper Products
Highway 3 and A&S Tracks
Sauget, Illinois 62202

Wastewater Discharge Permit No. 92-108

Dear Sirs:

In accordance with all the terms and conditions of Ordinance 632 of the Village of Sauget; the 1977 Regional Agreement as amended; Section 46 of the Illinois Environmental Protection Act of 1970 (Ill. Rev. Stat. 1987. Ch. 1111/2, Sec. 1046) as amended; and Ill. Rev. Stat. 1987, Ch 24, Sec. 11-141-7; permission is hereby granted to Cerro Copper Products, operating under the Standard Industrial Classification (SIC) Codes No. 3341, No. 3366, and No. 3351, and subject to the National Categorical Pretreatment Standard (NCPS) No. 40 CFR 421.65, 464.25 Subparts B and F, and 468.14, Subparts A, D, K, M, and Q, to discharge industrial wastewater into sewer lines tributary to the American Bottoms Regional Wastewater Treatment Plant in accordance with and subject to the provisions of attached American Bottoms Regional Wastewater Discharge Permit No. 92-108 ("Permit").

This Permit is granted in response to the application filed on January 23, 1992 in the office of the General Manager, #1 American Bottoms Road, Sauget, Illinois 62201, and in conformity with plans, specifications and other data submitted in support of the above application, all of which are filed with and considered as a part of this Permit, together with the attached conditions and requirements.

Nothing herein shall be construed as a permit or as permission for the permittee to violate the provisions of any sewer use ordinance in effect within the jurisdiction of any unit of local government in which the permittee's facility is located.

This Permit will take effect on September 1, 1992, and will expire on September 1, 1994.

Revised October 26, 1992, and reissued November 2, 1992.

VILLAGE OF SAUGET

By: _____
General Manager

REVISED: 10/26/92

PART 1 - GENERAL CONDITIONS OF PERMIT

A. General - This Wastewater Discharge Permit shall be expressly subject to all provisions of Ordinance 632 of the Village of Sauget (hereinafter "the Ordinance") and all other applicable regulations, user charges,and fees established by the Village of Sauget. In consideration of the granting of this Permit, the permittee shall comply with all provisions of the Ordinance, Permit conditions, and the Implementation procedures including, but not limited to the specific requirements of these General Condition Articles. Any Permit noncompliance constitutes a violation of the Ordinance, and is grounds for enforcement action.

B. Prohibitive Standards - The permittee shall comply with all prohibitive discharge standards pursuant to Section 3.2 of the Ordinance and all Local, State, and Federal discharge limits set forth in the Permit.

C. Prohibition of Improper Dilution - Improper dilution shall be prohibited pursuant to Section 3.6 of the Ordinance.

D. Duration - This Permit is issued effective September 1, 1992, and shall expire on September 1, 1994.

E. Transfer - Pursuant to Section 4.11 of the Ordinance, this Wastewater Discharge Permit may be reassigned or transferred, in whole or in part, to a new owner and/or operator only if the permittee gives at least thirty (30) days advance notice to the POTW and the POTW approves the Wastewater Discharge Permit transfer. The notice to the POTW must include a written certification by the new owner and/or operator which:

1. States that the new owner and/or operator has no immediate intent to change the facility's operations and processes;

2. Identifies the specific date on which the transfer is to occur; and

3. Acknowledges full responsibility for complying with the Wastewater Discharge Permit.

F. Change in Conditions - Pursuant to Section 4.7 of the Ordinance, in the event the type, quality, character or volume of Pollutants in a Discharge, including the listed or characteristic hazardous wastes for which the permittee has

submitted initial notification under Section 4.13.5 of the Ordinance, is expected to substantially change as reasonably determined by the permittee or POTW, the permittee or his assignee (see paragraph E. above) shall give sixty (60) days advance notice in writing to the POTW and shall make a new application to the POTW and the Sewer System Owner prior to said change. No permittee shall substantially change the type, quality, character or volume of its Wastewater beyond that allowed by this Permit without prior approval of the Sewer System Owner and the POTW.

G. Access - Pursuant to Section 4.15 of the Ordinance, persons or occupants of premises in which a Discharge source or treatment system is located or in which records are kept shall allow the POTW or its representative ready access upon presentation of credentials at reasonable times to all parts of said premises for the purposes of inspection, sampling, examination and photocopying of records required to be kept by the Ordinance and this Permit, and in the performance of any of their duties. The POTW shall have the right to set up on the permittee's property such devices as are necessary to conduct sampling, monitoring and metering operations.

H. Retention of Records - Pursuant to Section 4.15 of the Ordinance, the permittee shall maintain records of all information resulting from any monitoring activities required by this Ordinance and shall include:

1. The date, exact place, method and time of sampling and the names of the Person or Persons taking the samples;

2. The dates analyses were performed;

3. Who performed the analyses;

4. The analytical techniques/methods used; and

5. The results of such analyses.

The permittee shall maintain for inspection by the POTW, IEPA or USEPA such records for a minimum of three (3) years. This period of retention shall be extended during the course of any unresolved litigation regarding the Discharge of Pollutants by the permittee or operation of the POTW Pretreatment program or when requested by the Regional Administrator of USEPA or the Director of IEPA.

I. Analytical Methods - All measurements, sampling, tests, and analyses to which reference is made in this Permit shall be determined and performed in accordance with the procedures established by the Administrator of the United States Environmental Protection Agency (hereafter "Administrator") pursuant to Section 304(g) of the Act and contained in 40 CFR Part 136 and amendments thereto or with any other test procedures approved by the Administrator. Sampling shall be performed in accordance with the techniques approved by the Administrator. Where 40 CFR Part 136 does not include sampling or analytical techniques for the Pollutants in question, or where the Administrator determines that the Part 136 sampling and analytical techniques are inappropriate for the Pollutant in question, sampling and analyses shall be performed using validated analytical methods or any other sampling and analytical procedures, including procedures suggested by the POTW or other parties, approved by the Administrator.

J. Pretreatment Facilities - The permittee shall provide necessary Wastewater Pretreatment as required to comply with the Ordinance and shall achieve compliance with all applicable Pretreatment Requirements and Standards within the time limitations as specified by appropriate statutes, regulations, and the Ordinance. Any facilities required to pretreat Wastewater to a level acceptable to the POTW shall be provided, properly operated and maintained at the permittee's expense. Such Pretreatment facilities shall be under the control and direction of an IEPA certified Wastewater Treatment Operator.

K. Spill Containment - Pursuant to Section 3.7 of the Ordinance, any permittee having the ability to cause Interference or Pass-Through of the POTW or to violate the regulatory provisions of the Ordinance shall provide protection from Accidental or Slug Discharges to the POTW of prohibited materials or other substances regulated by the Ordinance. Any facilities required to prevent Accidental or Slug Discharge of prohibited materials shall be provided and maintained at the permittee's own cost and expense.

L. Permit Modifications - The terms and conditions of this Permit may be modified by the POTW during the term of the Permit for good cause including, but not limited to, the following: to incorporate any new or revised Federal, State, or local Pretreatment Standards or Requirements; to address significant alterations or additions to the permittee's operation, processes, or Wastewater volume or charac-

ter since the time of Wastewater Discharge Permit issuance; a change in the POTW that requires either a temporary or permanent reduction or elimination of the authorized Discharge; misrepresentation or failure to fully disclose all relevant facts in the Wastewater Discharge Permit application or in any required reporting; revision of or a grant of variance from Categorical Pretreatment Standards pursuant to 40 CFR 403.13; to correct typographical errors in the Wastewater Discharge Permit; or to reflect a transfer of the facility ownership and/or operation to a new owner/operator (as provided in paragraph E. above). The permittee shall be informed of any proposed changes in its Permit at least 30 days prior to the effective date of any modification.

M. Civil and Criminal Penalties - Pursuant to Part 6 of the Ordinance, any permittee who is found to have violated an Order of the POTW or who has failed to comply with any provision of the Ordinance, and the orders, rules, and regulations and Wastewater Discharge Permits issued thereunder, may be fined by appropriate suit at law in an amount not less than one hundred dollars ($100) nor more than one thousand dollars ($1000) per day for each violation. In addition to the penalties provided herein, the POTW may recover reasonable attorney's fees, court costs, court reporter fees and other expenses of litigation by appropriate suit at law against the Person found to have violated this Ordinance or the orders, rules, regulations and Permits issued thereunder.

Any Person who knowingly makes any false statements, representation or certification in any application, record, report, plan or other document filed or required to be maintained pursuant to the Ordinance or Wastewater Discharge Permit, or who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required under the Ordinance, shall in addition be guilty of a misdemeanor and upon conviction, be punished by a fine of $500 to $1,000, for each offense.

N. Additional Information - The permittee shall furnish any additional information as may be reasonably requested by the Village of Sauget from time to time.

O. Upset - Pursuant to Section 3.8 of the Ordinance, the permittee shall have an affirmative defense to an action brought for noncompliance with National Categorical Pretreatment Standards provided that the conditions of Section 3.8.3 of the Ordinance are met. In any enforcement proceed-

ing, the permittee seeking to establish the occurrence of an Upset shall have the burden of proof.

P. Bypass - Bypass provisions pursuant to Section 3.9 of the Ordinance are applicable to this Permit and are hereby incorporated by reference.

Q. Resampling - Pursuant to Section 4.13.3.7 of the Ordinance, if sampling performed by the permittee indicates a violation, the permittee shall notify the POTW within 24 hours of becoming aware of the violation. The permittee shall also repeat the sampling and analysis and submit the results of the repeat analysis to the POTW within 30 days after becoming aware of the violation, except the permittee is not required to resample if:

1. The POTW performs sampling at the permittee at a frequency of at least once per month, or

2. The POTW performs sampling at the permittee between the time when the permittee performs its initial sampling and the time when the permittee receives the results of this sampling.

Resampling is only required for those parameters for which the violation has been identified.

R. Notifications - The following verbal and written notifications are required:

1. Pursuant to Section 4.13.3.7 of the Ordinance, if sampling performed by the permittee indicates a violation of any requirements of the Ordinance or this Permit, the permittee shall notify the POTW within 24 hours of becoming aware of the violation. Such notification may be made orally by telephone.

2. Pursuant to Section 3.7.4 of the Ordinance, in the case of an Accidental or Slug Discharge of Pollutants which may cause Interference at the POTW or may Pass Through the POTW or violate any other requirements of the Ordinance or this Permit, it shall be the responsibility of the permittee to immediately telephone and notify the POTW and the Sewer System Owner of the incident. The notification shall include name of caller, location and time of Discharge, type of Wastewater, estimated concentration and volume. For permittees discharging to the P-Chem Plant, notice to the POTW only is required.

3. Within five days following an Accidental Discharge, the permittee shall submit to the POTW and the Sewer System Owner a detailed written report describing the cause of the Accidental Discharge and the measures to be taken by the permittee to prevent similar future occurrences.

4. A permittee wishing to establish the affirmative defense of Upset for noncompliance with National Categorical Pretreatment Standards shall, in addition to the 24-hour verbal notification required in 1. above, and under Section 3.8.3.3 of the Ordinance, provide a written submission containing the information required by Section 3.8.3.3 of the Ordinance within five days of becoming aware of the Upset.

5. Pursuant to Section 3.9.2.1 of the Ordinance, if the permittee knows in advance of the need for a Bypass, it shall submit prior written notice to the POTW, if possible at least ten days before the date of the Bypass.

6. Pursuant to Section 3.9.2.2 of the Ordinance, the permittee shall submit oral notice of an unanticipated Bypass that exceeds applicable Pretreatment Standards or Requirements to the POTW within 24 hours from the time the permittee becomes aware of the Bypass. A written submission meeting the requirements of Section 3.9.2.2 of the Ordinance shall also be provided to the POTW within 5 days of the time the permittee becomes aware of the Bypass.

7. Pursuant to Section 4.13.5.3 of the Ordinance, in the case of any new regulations under Section 3001 of RCRA identifying additional characteristics of hazardous waste or listing any additional substance as a hazardous waste, the permittee must notify the POTW, the EPA Regional Waste Management Division Director, and the State hazardous waste authorities of the Discharge of such substance within 90 days of the effective date of such regulations.

S. Report Submittal - All reports and/or notifications required by this Permit shall be submitted to:

American Bottoms Regional Wastewater Treatment Facility
#1 American Bottoms Road
Sauget, Illinois 62201
Attn: Pretreatment Coordinator

Telephone: (618) 337-1710
Facsimile: (618) 337-8919

PART 2 - GENERAL AND SPECIFIC REPORTING REQUIREMENTS

A. General - The General Pretreatment Regulations of 40 CFR 403.12 and Ordinance 632 have set forth basic reporting requirements that apply to the permittee.

B. Specific - The specific reporting requirements of this Permit include the following reporting requirements:

1. Monitoring Reports - Monitoring results obtained shall be summarized and reported on a monthly basis. The report is due on or before 45 days after the end of the month in which the sampling was performed. The report shall indicate the nature and concentration of all pollutants in the wastewater discharges which are regulated by the standards set forth in this Permit and include measured maximum and average daily flows. These reports will satisfy the requirement for the Periodic Compliance Report, provided they contain all the information and certifications required pursuant to Section 4.13.3 of the Ordinance.

PART 3 - GENERAL SAMPLING AND TESTING REQUIREMENTS

A. The permittee is responsible for compliance sampling. The monitoring facilities designated by this Permit are shown on Figure 1.

B. Compliance monitoring results and frequencies may be reviewed annually by the Village of Sauget and appropriate adjustments made to frequencies and parameters in a modified or revised Wastewater Discharge Permit.

C. All handling and preservation of collected samples and laboratory analyses shall be performed in accordance with procedures contained in 40 CFR Part 136 and amendments thereto unless specified otherwise in the monitoring conditions of this Permit. Composite sampling, where called for, shall be performed over a twenty-four (24) hour period by flow or time proportionate methods.

The test procedures for all samples shall conform to one of the USEPA approved test methods which provides the most sensitive detection limits for the pollutant under investigation listed in the current issue of the Code of Federal Regulations, and the most recent addendum published by the Federal Register. The testing for priority organic pollut-

ants shall be conducted utilizing gas chromatograph/mass spectrometer (GC/MS) methods and procedures. Other test procedures may be approved by the USEPA, pursuant to Section 4.15.2 of the Ordinance.

D. The appropriate flow measurement devices and methods consistent with approved scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated and maintained to ensure that the accuracy of the measurements are consistent with the accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than 10% from true discharge rates throughout the range of expected discharge volumes.

E. For each measurement or sample taken pursuant to the requirements of this Permit, the permittee shall maintain and submit records which include:

1. The date, exact place, method and time of sampling;
2. The names of the person or persons taking the samples;
3. The dates analyses were performed;
4. Who performed the analyses;
5. The analytical techniques/methods used;
6. The results of such analyses; and
7. The total flow during the sampling period.

F. In the event of a sampling failure, including, but not limited to, failure of sampling equipment, or sample damage, contamination, or breakage, sampling shall be repeated as soon as possible at all applicable required monitoring locations for those parameters for which the analysis of the original sample(s) was intended.

G. The 30 day resampling requirement of Part 1.Q. of this Permit shall apply to all monitoring locations identified in this Permit. Only those parameters for which the violation has been identified are required to be analyzed as part of the resampling.

H. Where agreed upon in advance by both parties, the POTW may perform monitoring and testing for a parameter(s) regulated by this permit and such POTW monitoring shall satisfy the self-monitoring requirement for the subject parameter(s).

PART 4 - EFFLUENT LIMITATIONS, SAMPLING AND TESTING REQUIREMENTS

A. Local Limits: The Village of Sauget reserves the right, in Ordinance 632, to establish limitations or requirements on discharges to the wastewater disposal system if deemed necessary to comply with the objectives presented in Section 1.4 of the Ordinance.

Parameter	Limitations
Ammonia nitrogen	50 mg/l (24-hour composite) 75 mg/l (grab)

B. State Limits: These limits are stated in 35 Ill. Adm. Code Part 307. This Part 307 places restrictions on the types, concentrations, and quantities of contaminants which can be discharged into sewer systems in the State.

Limitations:

Parameters	Monthly Average (mg/l)	Daily Composite (mg/l)	Grab sample (mg/l)
Mercury	0.003	0.006	0.015
Cyanide (Total)	--	--	10.0

Any sample tested shall not release more than 2 mg/l of cyanide when tested at a pH of 4.5 and at a temperature of 66°C (150°F) for a period of 30 minutes.

The mercury limitation shown is the alternate limitation based on 35 Illinois Adm. Code 307.1102(c). Subject to the averaging rule of Ill Adm. Code 304.104, the monthly average shall be the numerical average of all daily composites taken during a calendar month. A monthly average must be based on at least three daily composites.

C. National Categorical Pretreatment Standards (NCPS): Cerro Copper Products operations are subject to 40 CFR 421.65, 464.25 Subparts B and F, and 468.14, Subparts A, D, K, M, and Q, which have final compliance dates for Pretreatment Standards for Existing Sources (PSES) as follows:

Copper Forming: August 15, 1986
Secondary Copper: March 9, 1987
Metal Molding & Casting - Copper Casting: October 31, 1988

Sources must comply with 40 CFR Part 403 and achieve discharges not exceeding the mass listed in the regulation. Compliance with the monthly average limits are required regardless of the number of samples analyzed and averaged. The limits are identified as follows:

NCPS	Parameter	1-Day Max	Max. Monthly Average
421.65	--	--	--

No discharge of process wastewater pollutants

NCPS	Parameter	1-Day Max	Max. Monthly Average
464.25 B	Copper (T)	0.928	0.506
	Lead (T)	0.639	0.314
	Zinc (T)	0.916	0.350

Units are lb. per 10^6 lb. of metal poured.

NCPS	Parameter	1-Day Max	Max. Monthly Average
464.25 F	Copper (T)	1.81	0.988
	Lead (T)	1.25	0.612
	Zinc (T)	1.79	0.673
	Total Phenols	2.02	0.706
	TTO	5.41	1.77
	Oil & Grease	70.6	23.5

Units are pounds per billion SCF of air scrubbed.

As an alternative to monitoring for TTO, Cerro may elect to monitor for Oil & Grease. Complying with the Oil & Grease limit shall be the equivalent of complying with the TTO limit.

NCPS	Parameter	1-Day Max	Max. Monthly Average
468.14 A	Cr	0.045	0.018
	Cu	0.195	0.103
	Pb	0.015	0.013
	Ni	0.197	0.130
	Zn	0.150	0.062
	TTO	0.066	0.035
	Oil & Grease	2.060	1.236

Units are mg/off-kg (pounds per 10^6 off-pounds) of copper or copper alloy hot-rolled.

As an alternative to monitoring for TTO, Cerro may elect to monitor for Oil & Grease. Complying with the Oil & Grease limit shall be the equivalent of complying with the TTO limit.

Compliance with the monthly discharge limit is required regardless of the number of samples analyzed and averaged.

NCPS	Parameter	1-Day Max	Max. Monthly Average
468.14 D	Cr	0.284	0.116
	Cu	1.227	0.646
	Pb	0.096	0.083
	Ni	1.240	0.820
	Zn	0.943	0.394
	TTO	0.419	0.219
	Oil & Grease	12.920	7.752

Units are mg/off-kg (pounds per 10^6 off-pounds) of copper or copper alloy heat-treated.

As an alternative to monitoring for TTO, Cerro may elect to monitor for Oil & Grease. Complying with the Oil & Grease limit shall be the equivalent of complying with the TTO limit.

Compliance with the monthly discharge limit is required regardless of the number of samples analyzed and averaged.

NCPS	Parameter	1-Day Max	Max. Monthly Average
468.14 K	Cr	0.574	0.235
	Cu	2.481	1.306
	Pb	0.195	0.169
	Ni	2.507	1.658
	Zn	1.906	0.796
	TTO	0.848	0.444
	Oil & Grease	26.120	15.672

Units are mg/off-kg (pounds per 10^6 off-pounds) of copper or copper alloy pickled.

As an alternative to monitoring for TTO, Cerro may elect to monitor for Oil & Grease. Complying with the Oil & Grease limit shall be the equivalent of complying with the TTO limit.

Compliance with the monthly discharge limit is required regardless of the number of samples analyzed and averaged.

NCPS	Parameter	1-Day Max	Max. Monthly Average
468.14 M	Cr	0.051	0.020
	Cu	0.220	0.116
	Pb	0.017	0.015
	Ni	0.222	0.147
	Zn	0.169	0.070
	TTO	0.075	0.039
	Oil & Grease	2.320	1.392

Units are mg/off-kg (pounds per 10^6 off-pounds) of copper or copper alloy pickled.

Compliance with the monthly discharge limit is required regardless of the number of samples analyzed and averaged.

As an alternative to monitoring for TTO, Cerro may elect to monitor for Oil & Grease. Complying with the Oil & Grease limit shall be the equivalent of complying with the TTO limit.

NCPS	Parameter	1-Day Max	Max. Monthly Average
468.14 Q	Cr	0.009	0.003
	Cu	0.041	0.021
	Pb	0.003	0.002
	Ni	0.041	0.027
	Zn	0.031	0.013
	TTO	0.014	0.007
	Oil & Grease	0.436	0.261

Units are mg/off-kg (pounds per 10^6 off-pounds) of copper or copper alloy formed.

As an alternative to monitoring for TTO, Cerro may elect to monitor for Oil & Grease. Complying with the Oil & Grease limit shall be the equivalent of complying with the TTO limit.

D. Monitoring Schedule

1. The monitoring schedule requirements are required as of the effective date of this Permit.

2. Monitoring locations are indicated in the attached diagram - Figure 1.

3. State and Local Limitations at East Outfall (EOF) and West Outfall (WOF):

Parameters	Monthly Average (mg/l)	Daily Composite (mg/l)	Grab sample (mg/l)
Mercury	0.003	0.006	0.015
Cyanide (Total)	--	--	10.0
Ammonia-Nitrogen	--	50	75

4. Compliance with the ammonia nitrogen local limit will be determined by sampling and testing performed by the POTW. Permittee self-monitoring for ammonia is not required.

5. Copper Forming Limits for Main Tube Mill (Sampling Location 50):

Pollutant	Daily Maximum Limit lbs/day	Monthly Average Limit lbs/day
Copper	1.395	0.734
Chromium	0.330	0.131
Lead	0.109	0.093
Nickel	1.409	0.932
Zinc	1.071	0.447
Total Toxic Organics	0.476	0.249
Oil and Grease	14.692	8.814

Compliance with the above limits will be determined by measurement of pollutant discharge at Sampling Location 50.

6. Copper Forming Limits for the Piercing Mill, Building 80 (Sampling Location 40):

Pollutant	Daily Maximum Limit lbs/day	Monthly Average Limit lbs/day
Copper	0.338	0.178
Chromium	0.078	0.032
Lead	0.026	0.023
Nickel	0.341	0.226
Zinc	0.259	0.108
Total Toxic Organics	0.115	0.060
Oil and Grease	3.558	2.134

Compliance with the above limits will be determined by measurements of pollutant discharge at Sampling Location 40.

7. Secondary Copper Limits (Sampling Location 60):

Cerro shall not discharge any process wastewater pollutants from any operations subject to 40 C.F.R. Part 421 and shall comply by recycling and reusing all wastewater flows that are subject to 40 C.F.R. Part 421, except such wastewater may be transferred to the Metal Molding and Casting ("MMC") portion of the facility in accordance with the paragraphs below.

Cerro may transfer process wastewater containing pollutants from the anode furnace air pollution control scrubber to the MMC portion of the facility only if all of the following conditions are met:

a. Cerro shall not transfer more than a monthly average of 10,000 gallons per day of anode furnace air pollution control scrubber wastewater for use as make-up water in the MMC portion of the Cerro facility. Cerro shall manage all wastewater transferred from the anode furnace air pollution control scrubber as wastewater regulated by the National Categorical Pretreatment Standard which applies to the MMC portion of the facility.

b. Cerro shall not transfer any anode furnace air pollution control scrubber wastewater to the MMC portion of the facility unless it complies with the following limits:

Pollutant	Limit (monthly average)[1]
Copper	2 mg/l
Cadmium	2 mg/l
Lead	2 mg/l
Zinc	6 mg/l

c. Cerro shall reuse (e.g., through sale to a reclaimer) or recycle, on or off-site, all solid residuals or sludge generated from the MMC wastewater treatment portion of the facility, but in no event shall Cerro land dispose any such solid residuals or sludge generated from the MMC portion of the facility.

Compliance with this limit will be determined by measurement of pollutant discharge at Sampling Location 60.

8. Metal Molding and Casting Limits for Building 19 WWTF (Sampling Location 30):

Pollutant	Daily Maximum Limit lbs/day	Monthly Average Limit lbs/day
Copper	1.513	0.825
Lead	1.043	0.512
Zinc	1.495	0.570
Total Toxic Organics	0.225	0.074
Oil and Grease	2.937	0.978
Phenols (4AAP)	0.085	0.029

If Cerro discharges batches of wastewater which represent more than one day of operation, then the applicable limit for such discharge shall be multiplied by the number of days (calculated per quarter day) of production which generated the wastewater. Regardless of the number of days of production, Cerro must comply with the monthly average limitations set forth above without any adjustment.

Compliance with the above limits will be determined by measurement of pollutant discharges at Sampling Location 30.

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[1] For purposes of this permit, "monthly average" is defined as the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

9. Monitoring Frequencies:

Cerro shall perform the monitoring, sampling analysis and reporting required by 40 C.F.R. 403.12(e) at the location, frequency and methods described in the table below and samples shall be representative of daily operations.

Parameter (Units)	Sample Type[a]	Location[b]/frequency					
		WOF	EOF	30	40	50	60
Flow (gal.)	Meter	D	D	D	D	D	D
Copper (mg/l)	Comp.						Q
Cadmium (mg/l)	Comp.						Q
Lead (mg/l)	Comp.						Q
Zinc (mg/l)	Comp.						Q
Copper (lb/d)	Comp.			Q	Q	Q	
Chromium (lb/d)	Comp.			Q	Q	Q	
Lead (lb/d)	Comp.			Q	Q	Q	
Nickel (lb/d)	Comp.			Q	Q	Q	
Zinc (lb/d)	Comp.			Q	Q	Q	
TTO-VOA (lb/d)	Grab			SA	SA	SA	
TTO-BNA (lb/d)	Comp.			SA	SA	SA	
Oil & Grease[c](lb/d)	Grab			SA	SA	SA	
Phenols (lb/d)	Grab			Q			
Mercury (mg/l)	Comp.	M	M				
Cyanide (mg/l)	Grab	M	M				

D: Daily flow recording based on totalized flow measurements.
M: Monthly Samples
Q: Quarterly Samples
SA: Semi-Annual Samples

Notes:

[a] (1) Composite sample is a 24-hour flow proportional composite sample as defined in 40 C.F.R. 403 Appendix E (I).
(2) Grab Sample is an individual sample collected over a period of time not to exceeding 15 minutes and a minimum of 4 grab samples per parameter to characterize a parameter over a 24 hour sampling period. The method is described in 40 C.F.R. 403 Appendix E (II).

[b] WOF - West Outfall
EOF - East Outfall
Location 30 - Metal Molding & Casting (Bldg. 19 WWTF)
Location 40 - Copper Forming (Piercing Mill)
Location 50 - Main Tube Mill
Location 60 - Anode Scrubber Transfer

[c] As an alternative to monitoring for TTO, Cerro may elect to monitor for Oil & Grease. Complying with the Oil & Grease limit shall be considered the equivalent of complying with the TTO limit. If TTO is monitored, Oil & Grease monitoring is not required.

PART 5 - COMPLIANCE SCHEDULE

A. General:

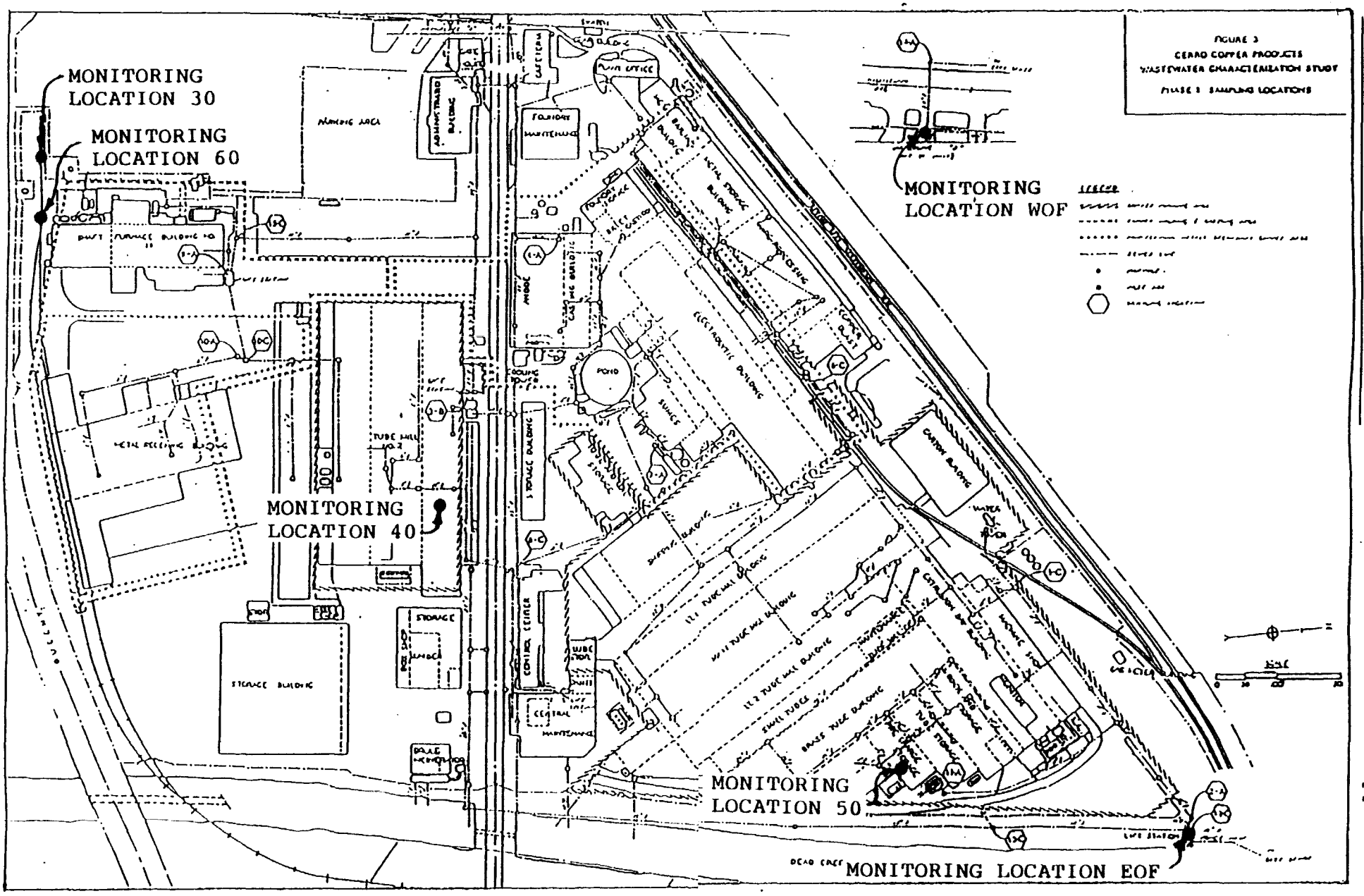
Authority Citation: Section 4.13 Village of Sauget Pretreatment Ordinance No. 632.

Permit No. 92-108

Industry Name: Cerro Copper Products

B. Final Compliance Date:

Copper Forming: August 15, 1986
Secondary Copper: March 9, 1987
Metal Molding & Casting - Copper Casting: October 31, 1988



MONITORING LOCATION PLAN
CERRO COPPER PRODUCTS CO.

hibit
e Taken 8-8-89

Exhibit G